GRUNDIG

VIDEORECORDER GV 280 S VPT

Part 1

English

Special Features

The Super-VHS system

Super-VHS (S-VHS) is the latest development in the world of VHS video.
Better brilliance and clarity for playing back video recordings in standard or long playing mode are two advantages of this recorder.

When the recorder is used in conjunction with a S-VHS television set you can achieve the optimum picture and sound quality.

The dialogue remote control handset...

...is the central control unit for this video recorder.

From the comfort of your armchair, you can remotely control nearly all of the recorder functions.

GRUNDIG on-screen dialogue – what is it?

Using the on-screen dialogue as an instruction guide makes seemingly complicated settings and data entries easy and understandable for everyone.

The correct diagrams, tables, and dialogue lines – from which you can determine the next possible operating steps – always appear on the TV screen.

To make programming even easier, you will also be shown the corresponding buttons on the remote control handset.

You will be guided systematically and step by step until you have achieved the desired result.

It is possible to use the on-screen dialogue in several languages.

GRUNDIG Toptext Programming, with VPT

Programming with the remote control handset, double checking on the TV set...

...i.e., calling up certain Teletext pages, then immediately selecting and confirming the desired data from the programme listings of the TV channels. These data are then displayed on the screen of the TV set.

The GRUNDIG Archive System ...

... an electronic notebook for your cassette collection.

With the basic version of this system you can store up to 700 titles (as well as a lot of other information). The storage capacity of the archive system can be expanded to 1400 titles.

The advantages of the GRUNDIG archive system are as follows:

You always have the list of your titles at your finger-tips because all the information is stored in the video recorder.

Titles and other additional information about broadcasts are "automatically" stored in the archive system while being recorded. It is necessary, however, that the TV stations from which you are recording the broadcasts transmit Teletext.

Any recordings made previously can be entered into the archive system.

You can inquire about titles, key-words and subject areas with one finger stroke.

A summary of the remaining playing times on all archived cassettes allows you to quickly find a cassette with sufficient space for a new recording.

Jog and shuttle – creative playback arranging in an instant

The jog and shuttle functions allow you to "flip through" your recordings at high speed, to search for specific scenes at half playback speed, to "freeze" a picture for closer examination and to move the images forward, picture by picture – all in a few instants.

Of course, you can also select the jog and shuttle functions with the remote control handset.

Recording and playing back in hifi quality

Your video recorder records the sound signal not only on the mono (longitudinal) track, but also on a hifi (helical) track.
This feature allows you to use the video cassette recorder as a hifi tape recorder for high quality recording and playback.

Integrated audiomixer

With this recorder it is possible to add a sound track to the mono and hifi tracks using sound signals from the microphone and audio inputs – either separately or mixed, depending on your preference.

The mix function allows you to reproduce the sound signals from the hifi helical track and the normal track at the same time.

Editing and optically altering films with television studio techniques.

This recorder features:

different blending screens, colour or picture to picture;

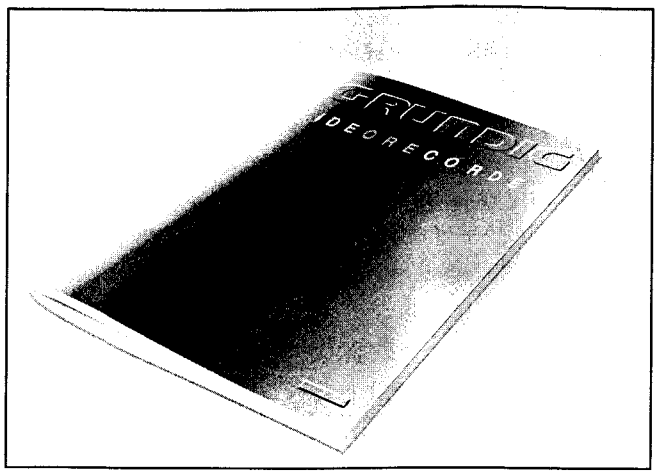
different digital picture effects such as mosaic, paint, strobe, zoom and much more;

a superimposing function which can mix two video (picture) signals, alternately with each another or with coloured picture segments.

Creating your own title pages

You can create several different "title pages" with this recorder and the remote control handset.
You can edit your holiday movies (filmed with a camcorder) by adding in these title pages.

How to Use these Operating Instructions



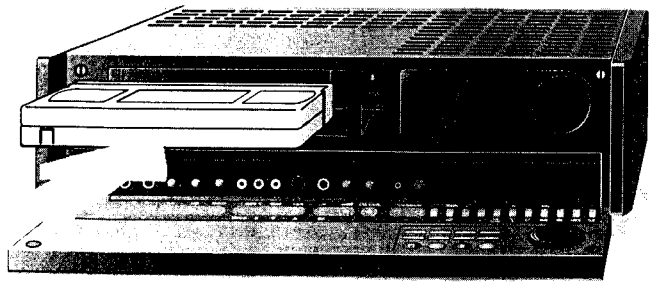
4. Playback Basic Function

Playback at a Glance

Playback operation is possible with the buttons on the remote control handset or with the controls on the recorder.

Open the front flap of the recorder.

Insert the cassette you want to play in the cassette compartment. It will be pulled in automatically. The recorder will then determine the length of the cassette (display indication: PLAY) and the cassette format (S-VHS or VHS).
The recorder will then request a cassette number (display indication: CASS. NUMBER). You only have to enter the cassette number if you want to use the archive system (see the explanation for using the archive system in the second part of the operating instructions on page 4).



4. Playback Comfort Functions

Using the remote control handset

Forward slow motion

Press the ▶▶ button during playback to select this function.

The display indication: 00:00 appears on the recorder.

Reverse slow motion*

Press the ❚❚ button and then the ◀ button during playback to select this function.

The display indication: ◁ 00 appears on the recorder.

Modifying the slow-motion speed

Press the ▶▶ button while in the slow-motion mode.

The slow motion speed will decrease.

The additional display indication: – SLOW + appears on the recorder.

Repeatedly press the ◀ button to decrease the slow-motion speed little by little.

Repeatedly press the ▶ button to increase the slow-motion speed little by little.

To return to normal slow-motion speed, press the ▶▶ button.

Digital Freeze-Frame

Press the STOP button during playback.
A freeze-frame will appear on the TV screen, the playback continues to "run", but cannot be seen.

To continue playback, press the CL button.

Reverse Play*

Press the ◀ button during playback.

The display indication: ◁ appears on the recorder.

Press the ▶ button to switch back to play.

Forward Picture Search*

(7-times normal playback speed)
Press the ▶▶ button during playback.

▷▷ appears on the recorder.

Dear Customer,

so that you can use the versatile comfort functions of this video recorder safely and without problems, these operating instructions have been organized into two parts and into clear and logical operating steps.

Throughout this manual, the headings in the table of contents and in the pages of the manual are highlighted with the same corresponding colour.

These colour markings will guide you through the necessary steps to complete your desired operation.

Here is how the system works:

The headings marked with blue direct you to the
Safety Precautions,
chapter, which absolutely must be read before using the video recorder, and
to the basic functions in the following chapters:
Connecting and Set Up
Playback
Immediate Recording
Recording Programming
The information in these chapters is sufficient for operating the basic functions.

The headings marked with grey direct you to the supplementary functions in the chapters
Connecting and Set Up
The Cassette
Playback
Fast tape Wind and Search Functions
Immediate Recording
Recording Programming
These chapters provide comprehensive and detailed information about all of the recorder's other functions.

The table of contents on the following pages provides an overview of all of the chapters.

Contents

Page

1 Preparation and Safety Precautions

Preparation 6-7
Safety precautions 7

2 Connecting and Set Up

Connecting the recorder 8
Your recorder's display 9
Opening the front flap of the recorder 9
Inserting batteries into the remote control handset 10
Opening the remote control handset 10
Setting the television set to the recorder 11
Switching the recorder's transmitter on and off 12
GRUNDIG on-screen dialogue 13
Selecting the on-screen dialogue language 14
Setting the television channels
... with the automatic channel programming (ACP) 15-19
... by entering the channel number 15, 20-23

3 The cassette

The S-VHS and the VHS cassette 24
Cassette recognition 24
Cassette playing time 24
Entering the cassette number 25
Protecting the recording against unintentional erasure 25

4 Playback

Playback at a glance 26
Optimizing picture and sound quality 27
Coloured noise suppressor 27
Optimizing picture sharpness (crispening) 27
Playback of longplay recordings 27
Selecting the sound track 27
The different playback speeds 28
Forward or reverse freeze-frame stepping 29
Adjusting the slow-motion speed 29
Play-pause/freeze-frame 30
Digital freeze-frame 30
Reverse play 30
Forward picture search 30
Reverse picture search 30

Contents

Page

5 Fast tape Wind and Search Functions

Fast tape wind 31
The edit-search function 31
The go-to function 31
The automatic programme finder 32

6 Immediate Recording

Recording at a glance 33
Selecting a programme position 34
Selecting longplay mode 34
Starting recording 34
Entering the stop time 34
Marking specific scenes in a recording 35
Recording-pause 35
Terminating the immediate recording 35
Assembling recordings with clean joins (assembly editing) 35
Recording the time and date 35
Sound recording special features 36
Recording Teletext pages and subtitles 37

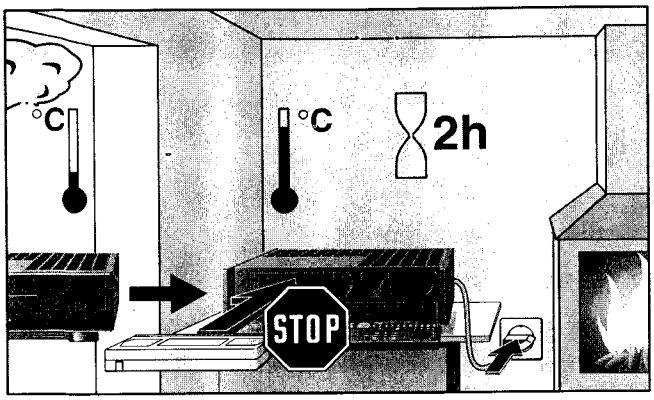
7 Recording Programming

The three variants 38
VPS – The Video Programme System 39
Using the remote control handset to enter recording data, variant 1 40-44
Quick programming using the Teletext pages from TV stations, variant 2 45-49
Programming with the remote control handset using on-screen dialogue and manual data entry, variant 3 50-58

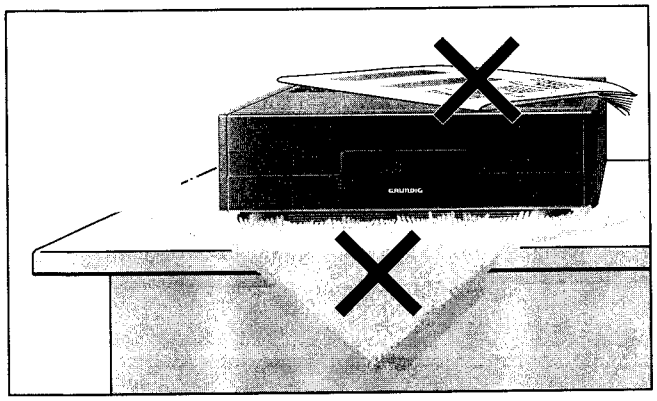
8 Valuable Information

The remote control handset at a glance 58-61
Fixing faults yourself 62-63
Technical data 64
GRUNDIG Service-Germany/Europe 65

1. Preparation and Safety Precautions

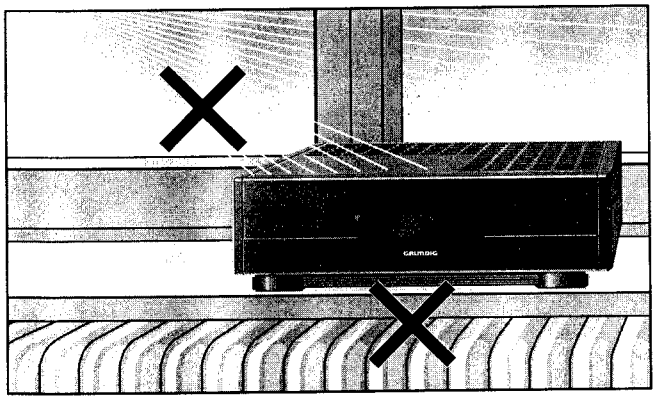


Do not expose the recorder to drastic temperature changes, e.g., when taking it from a warm to a cold place.
If this should happen, switch on the recorder and let it stand at the new place for at least two hours without a cassette loaded.

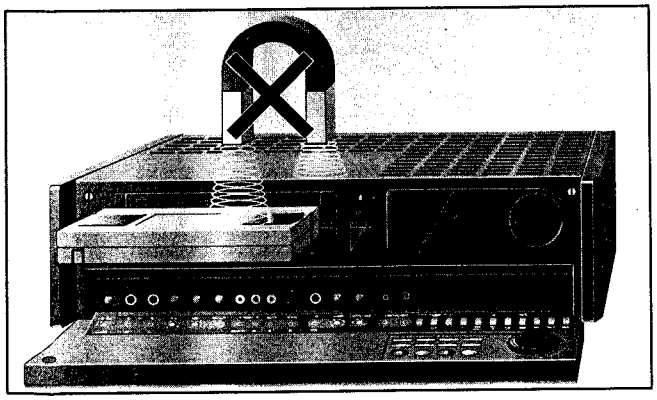


Place the recorder on a flat and hard surface.

Do not place the recorder on a mat or something similar and do not lay any objects (e.g., newspapers) onto the recorder, as this would obstruct the ventilation slots required for cooling.

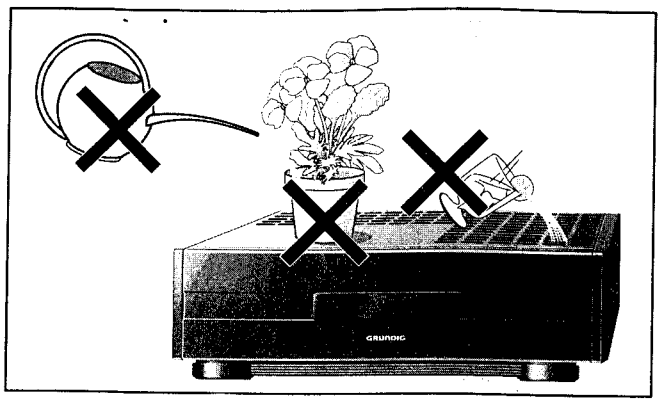


Do not place the recorder in the immediate vicinity of a heat source or in direct sunlight, as this would also prevent appropriate cooling.

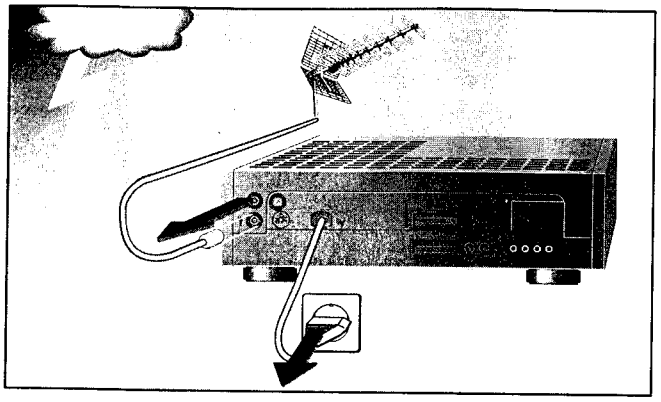


Keep the recorder away from magnetic fields (e.g., louspeakers).

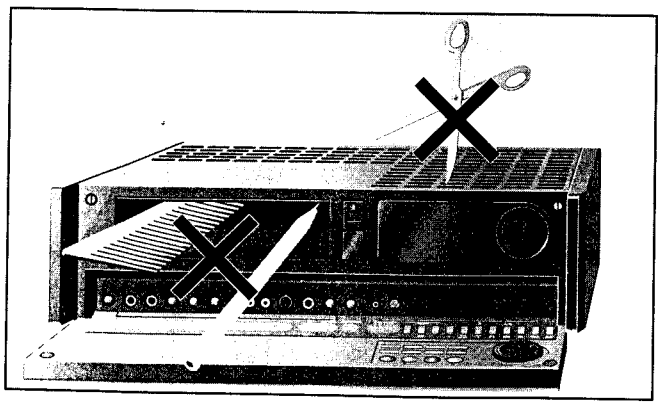
1. Preparation and Safety Precautions



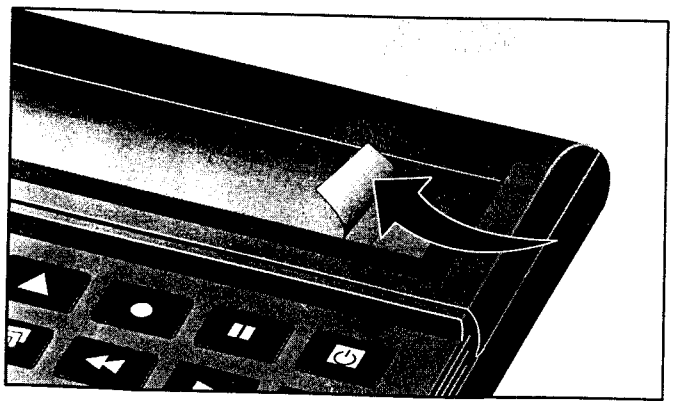
Do not expose the recorder and the cassettes to any moisture. The recorder is intended for use in dry rooms.
If you wish to operate it in the open air nevertheless, make absolutely sure that it is protected against moisture (rain, splashes of water).
Do not place any vessels filled with water (vases or something like that) onto the recorder. The vessel might fall over and the liquid penetrating in this case into the unit might endanger its electric safety.



Thunderstorms are a danger for each electrical appliance. Even when switched off, the recorder might be damaged by a lightning striking the mains and/or aerial lead.
During a thunderstorm you should therefore always disconnect the mains and aerial plugs.



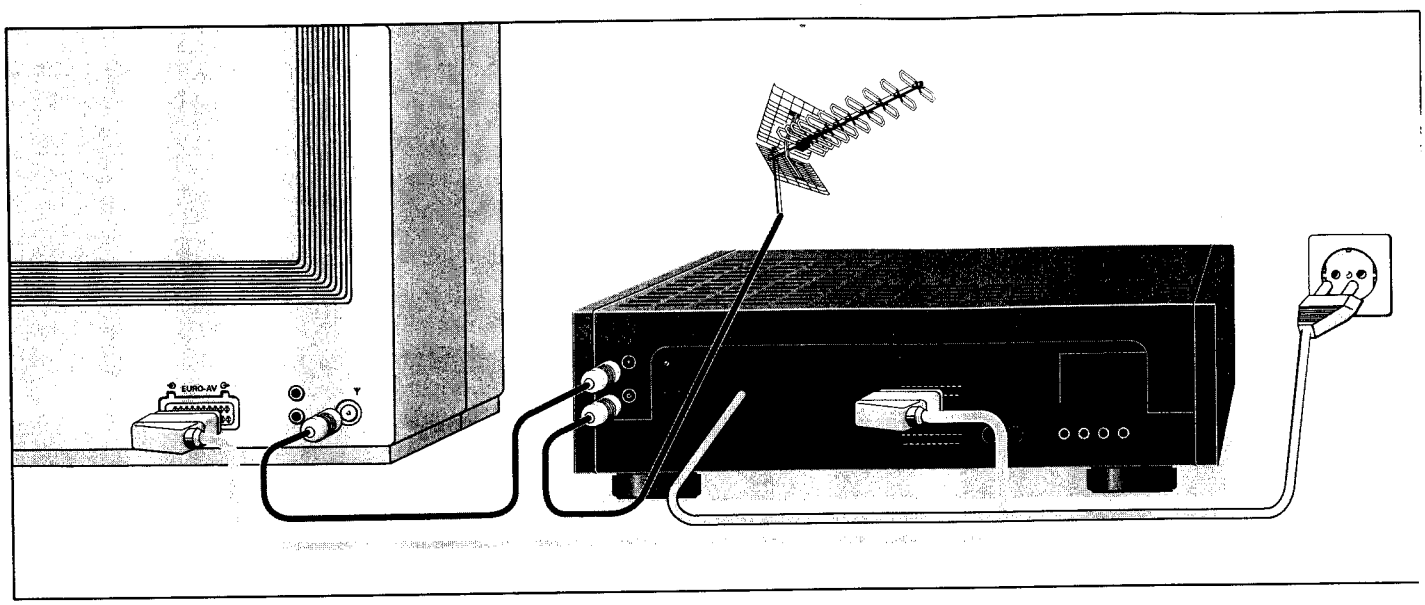
Never put foreign matters into the cassette compartment or the ventilation slots of the recorder, as this might damage high-value mechanical parts.



Several parts of the recorder and the remote control handset (e.g., the display) are covered with a protective foil. This foil can be removed.

2. Connecting and Set Up

Connecting the Video Recorder



Connecting the recorder to the aerial

Remove the plug of the aerial cable from the aerial socket of your TV receiver and insert it into the aerial socket Y of the recorder.

Connecting the recorder and the TV receiver

Connect the socket ⊡ of the recorder with the aerial socket of the TV receiver using the aerial cable supplied with the recorder.

If your TV receiver is provided with a EURO-AV socket, then connect in addition this socket via a Euro-AV connecting cable with the output socket ⊖ EURO-AV ⊖ of the recorder.
You can buy a Euro-AV cable in electronic specialty stores

The advantage of this connection is a still better picture and sound quality during playback.

If you connect the recorder to a television set according to the 16:9 format, pay attention to the set up in part 2 of these operating instructions, on page 73.

Connecting the recorder to the mains

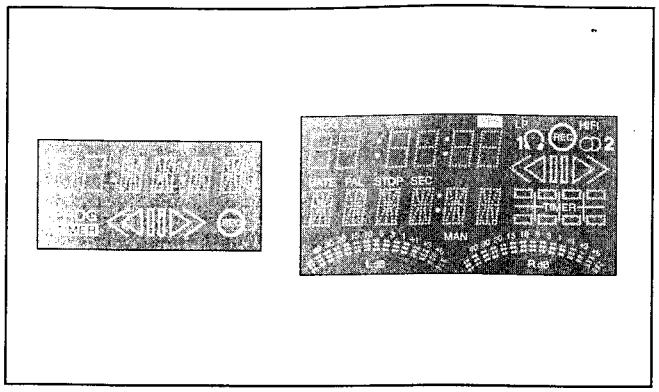
Insert the plug of the mains cable into the wall socket.
The recorder is now on.

The mains cable must only be replaced by an original part by a specialist according to the VDE/IEC guidelines.

Only by pulling the mains plug the recorder will completely be isolated from the mains.

2. Connecting and Set Up

Your Recorder's Display

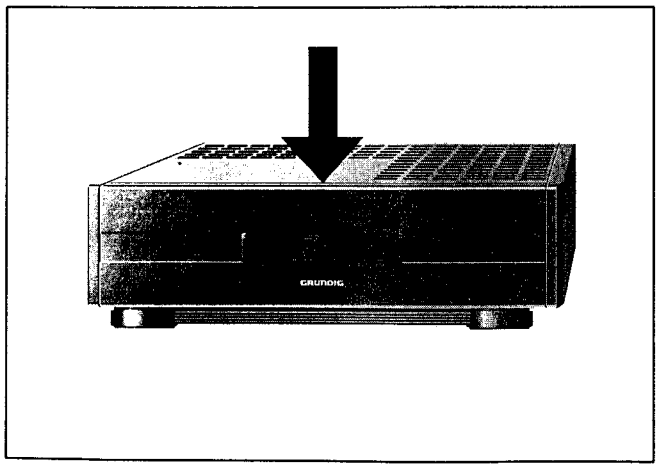


Your recorder has two displays:

A display on the front flap for basic functions such as the time and date, cassette playing time, operating functions, etc.

A display located behind the front flap. A description of this display can be found in the corresponding chapter in the operating instructions.

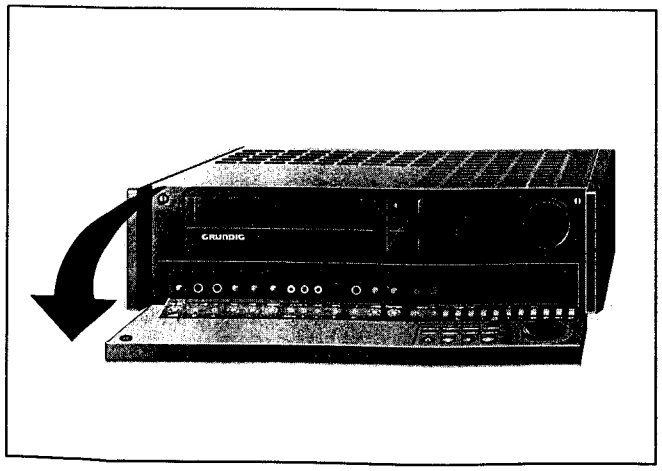
Opening the Front Flap of Your Recorder



Open the front flap by swinging it down towards the ground. See illustration.

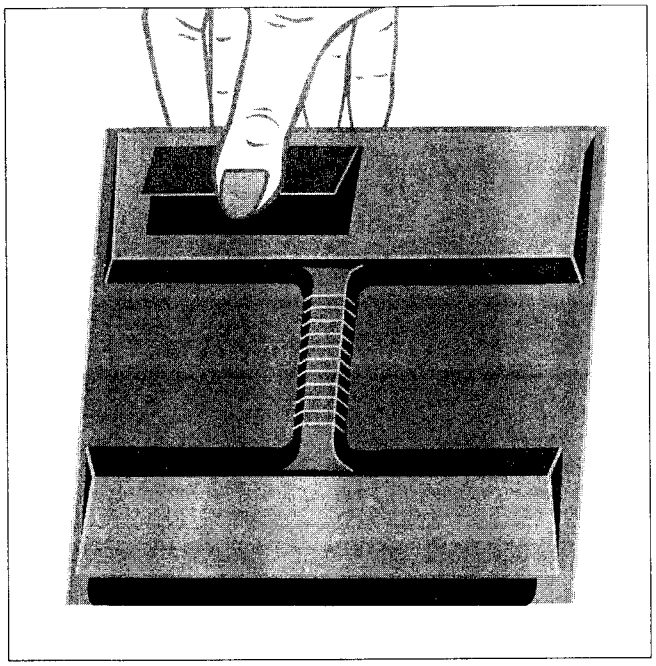
The connecting jacks, the buttons, the controls and the cassette compartment are located behind the front flap.

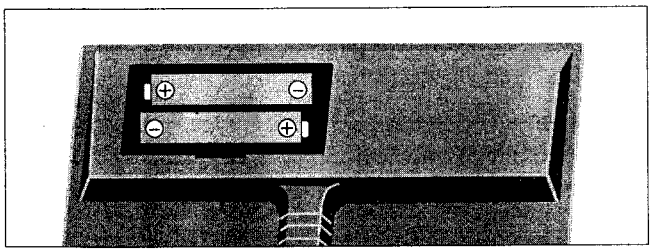
Descriptions of the functions of these components are found in the corresponding chapters in the operating instructions.



2. Connecting and Set Up

Inserting Batteries into the Remote Control Handset





Press on the catch and remove the cover from the battery compartment.

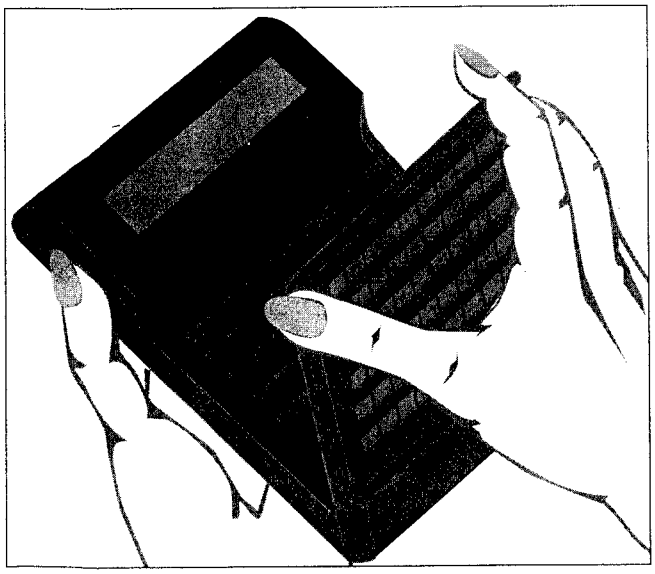
Insert the batteries (2x1.5V, type LR 6 (GB:HP 7) observing correct polarity (marked on the bottom of the compartment).

If your recorder no longer correctly responds to the remote control commands, the batteries may be exhausted.

Change exhausted batteries immediately.
No responsibility will be taken for damage caused by leaking batteries.

Exhausted batteries must be handed over to a special refuse collecting point (environmental protection).

Opening the Remote Control Handset



The buttons on the remote control handset are divided into three operational levels.

The first level operates the basic functions, the second and third levels are used to create "title pages" and text/graphics boxes, for the fade functions, as well as for archive system entries and for setting programmes.

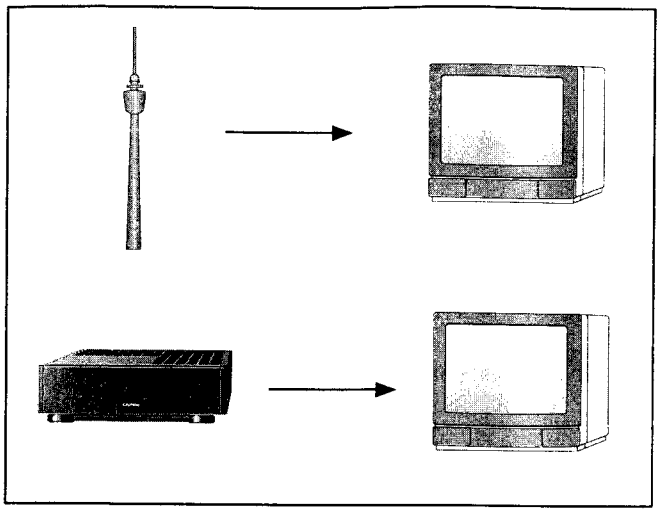
To use the buttons for the second and third operational levels, you have to open the remote control handset (see illustration).

The first operational level is turned off when the remote control handset is open.

The VIDEO 1 TV VIDEO 2 switch must be in the VIDEO 1 position for this recorder to operate.

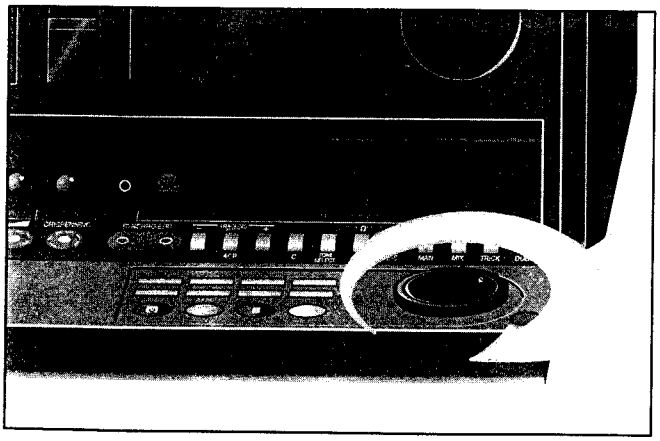
2. Connecting and Set Up

Setting Your TV Set to the Recorder



Your TV set receives programmes from different stations on certain channels.

Your recorder also transmits on such a channel (between channels 30 and 40 ± 2 channels, in UHF), and your TV set must be set on this channel.
To do this, there is a "transmitter", which transmits a colour test pattern, built in to the recorder.



Preparation

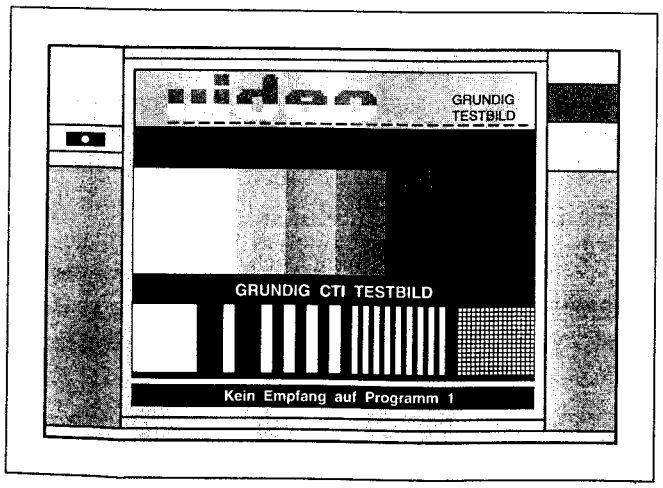
Turn on the television set.

Select the AV programme position for the recorder on the television set.

Remove the aerial cable from the Y jack of the recorder.

Open the front flap of the recorder.

Turn on the colour test pattern by turning the "jog" wheel on the front of the recorder to the right (see illustration)
The recorder will "transmit" the colour test pattern after a short time. (Indication: NO MOD)



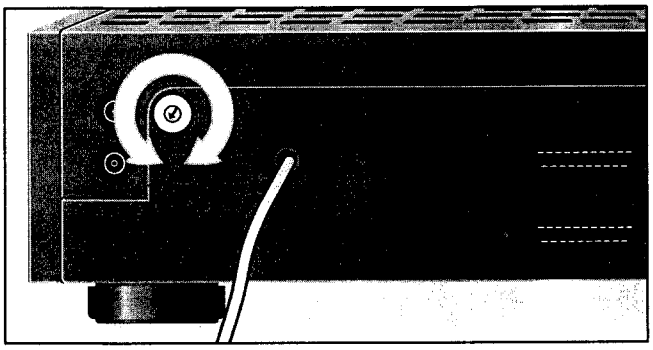
Locate and store the colour test pattern between channels 30 and 40 ± 2 channels
For further instructions, check your television set's instruction manual.

Re-plug the aerial cable into the aerial jack Y of the recorder.

If the picture quality is good,
press the ⏻ button on the recorder to set the channel.

If the picture quality is poor, go to the next page.

2. Connecting and Set Up



Improving the picture quality

If wavy lines appear on the screen, the channel you have set is already occupied by a TV station.

In this case, do the following:

Press the ⏻ button on the recorder.

On the television, locate a channel in the UHF band between channels 30 and 40 ± 2 channels – that is not occupied by a station (only noise, no picture on the screen).

Store the channel in the television set (for further instructions check your TV set's instruction manual).

Pull the aerial cable out of the Y jack on the recorder.

Switch on the colour test pattern by turning the jog wheel on the front of the recorder to the right.
The recorder will transmit the colour test pattern after a short time.

Turn the channel selector ⌀ on the back of the recorder (see illustration) slightly to the right or to the left with the selector tool (included with the recorder), until the colour test pattern appears on the screen.

Re-attach the aerial cable into the Y jack in the recorder and press the ⏻ button to end the channel setting.

Switching the Recorder's Transmitter On and Off

If your recorder receives a lot of TV channels between channels 30 and 40, the picture from the recorder could be affected. To avoid this, you can switch off the transmitter in the recorder.

In order for the recorder's picture and sound signals to transfer to your television, the TV and recorder have to be connected with a Euro-AV cable (see page 8).

Switching the recorder's transmitter off

Press the following number buttons consecutively:
8 5 1 8 and then press the OK button.
The recorder's transmitter is now turned off.

Switching the recorder's transmitter on

Press the following number buttons consecutively:
8 5 1 9 and then press the OK button.
The recorder's transmitter is now turned on.

2. Connecting and Set Up

GRUNDIG On-Screen Dialogue ...

... enables a dialogue between you and your video recorder.

For many functions which you select with the remote control handset, the recorder provides info menus and dialogue lines on the TV screen.

Symbols for the keys on the remote control handset and the dialogue lines indicate the next possible operating steps.

You will be simply and clearly guided, step by step.

Every time you press a button on the remote control handset, the ◻ symbol will confirm it in the display.

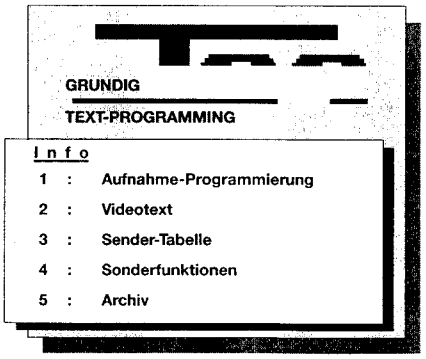
Preparation

Turn on the television set.

Select the AV programme position for the recorder on the television set.

Calling up the Info menu

Call up the "Info" menu with the INFO button.
The "Info" menu will appear on the TV screen and will show you which functions you can select.



INFO will appear on your recorder's display.

You can select the different functions from the "Info" menu with the number buttons 1 to 5.
Further instructions can be found in the respective chapters of this instruction manual.

Enlarging the Info menu

Standard script size = basic setting.
Pressing the button consecutively will change the script as follows:

double script size in the upper half of the menu;
double script size in the lower half of the menu;
standard script size on the entire menu.

To turn the Info menu off

Press the INFO button.

2. Connecting and Set Up

Selecting a Language

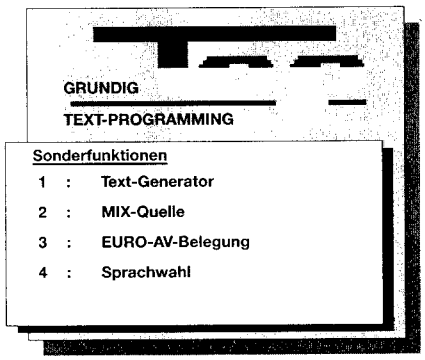
You can choose between several languages for the dialogue with the recorder.
It is preset in German.
To select another language proceed as follows:

Turn the TV set on.

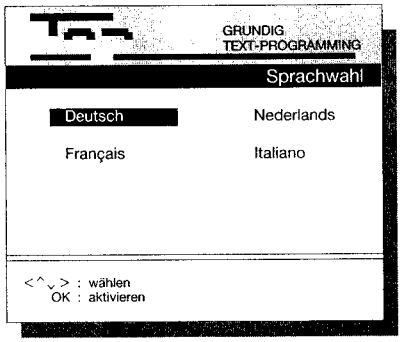
Select the AV programme position for the recorder on the television set.

Call up the "Info" menu with the INFO button.

With the 4 number button select the line "Sonder funktionen" (Special Functions) from the "Info" menu.
The "Sonderfunktionen" menu will appear.



Select the line "Sprachwahl" (Selecting a Language) with the number button 4 from the "Sonderfunktionen" menu.
The "Sprachwahl" menu will appear.



Select the desired language with the ▲, ▼, ◀ or ▶ buttons.
The selected language will be marked with blue.

Activate the selected language with the OK button.
The recorder switches to the "Info" menu and from now on all menus and dialogue lines will be in the chosen language.

Press the INFO button to end the operation.

2. Connecting and Set Up

Setting the Television Channels

Television stations broadcast their programmes on different frequencies/channels.

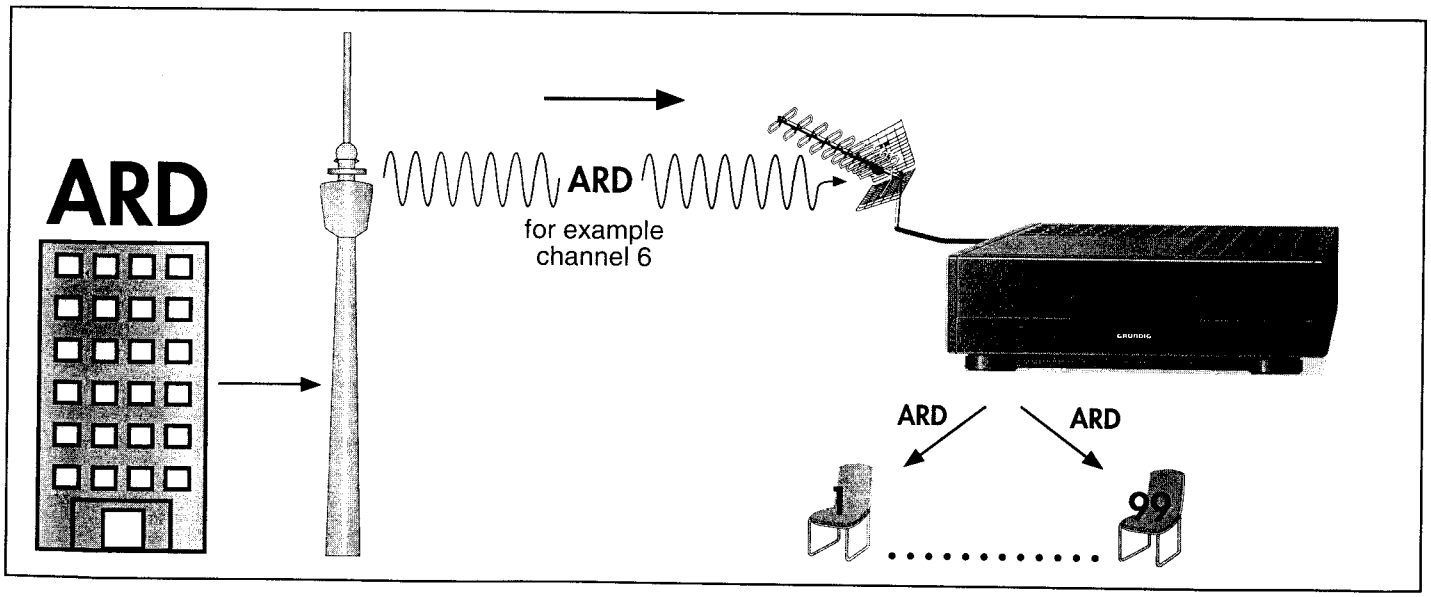
Your recorder has a built-in receiver so that it can receive and record television programmes independent of the television.

To do this you must set the channels in your recorder. The channel identification is given in numbers.

There are 99 programme positions available.
You can set the channels, and the programmes, as you wish in the 99 positions.

There are two options:

1. Setting them with the ACP – Automatic Channel Programming;
2. Entering the channel number into the "Sender-Tabelle" (Station Table).



Setting the Television Channels with the Automatic Channel Programming (ACP) Variant 1

Preparation

Turn the TV set on.

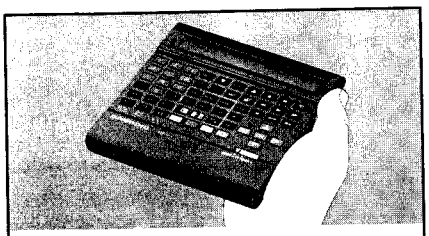
Select the AV programme position for the recorder on the television set.
You can check the settings on the TV screen.

Open the front flap of the recorder.

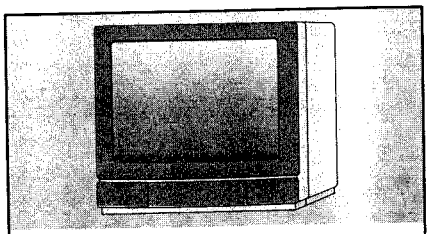
What is ACP?

With this function, the recorder can store all of the channel numbers/special channel numbers of the TV programmes which are received in your area.

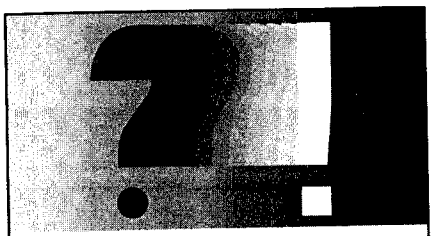
After the settings have been made, you can allocate the TV programmes to the programme position of your choice.



Press these buttons on the remote control unit



You will see this on your TV screen



Explanation

1. To select the ACP function

ACP

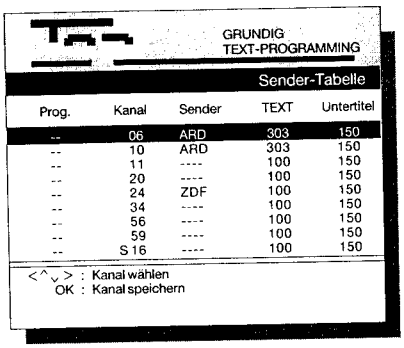
(hold down for a longer time on recorder)

"ACP" will appear in the recorder's display.

The recorder will now search for all channels according to television programme and will register all channels found.

All previously stored channels will be completely erased.

If the recorder has executed the ACP, after a short time the "Sender-Tabelle" (Station Table) will automatically appear on the screen. The first line will be highlighted in blue.


GRUNDIG
TEXT-PROGRAMMING
Sender-Tabelle
Prog. Kanal Sender TEXT Untertitel
-- 06 ARD 303 150
-- 10 ARD 303 150
-- 11 ---- 100 150
-- 20 ---- 100 150
-- 24 ZDF 100 150
-- 34 ---- 100 150
-- 56 ---- 100 150
-- 59 ---- 100 150
-- S16 ---- 100 150
<^v> : Kanal wählen
OK : Kanal speichern

The channels will appear in numerical order, followed by the special channels (indicated by an S to the left of the channel number).

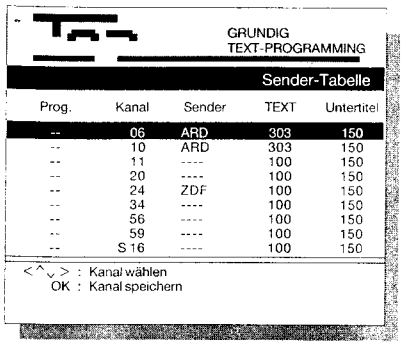
If a station abbreviation appears next to the channel number (e.g., ARD, ZDF, etc.), then a VPS-signal will be sent to this programme.

▶▶

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

2. Selecting a channel/programme

▼ or ▲

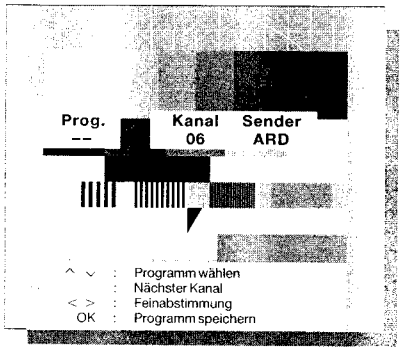

GRUNDIG
TEXT-PROGRAMMING
Sender-Tabelle
Prog. Kanal Sender TEXT Untertitel
-- 06 ARD 303 150
-- 10 ARD 303 150
-- 11 ---- 100 150
-- 20 ---- 100 150
-- 24 ZDF 100 150
-- 34 ---- 100 150
-- 56 ---- 100 150
-- 59 ---- 100 150
-- S 16 ---- 100 150
< ^ v > : Kanal wählen
OK : Kanal speichern

The selected channel will be highlighted in blue.

To go to other station table menus press the ▶ button.
You will see the consecutive station tables on the TV screen along with the channel numbers of the programmes.
To switch back to a previous menu, press the ◀ button.

3. Allocating the channel numbers/programmes to the programmes position

OK



You will see the picture of the programme on the TV screen.

a) Select the programme position

▼ or ▲

If you want the next channel/programme to be allocated press the ▭ button (blue).
The picture and the data on the next TV programme will appear on the TV screen.

If you see a TV programme that is transmitted with another colour norm (SECAM colour norm), "SEC" will also appear in the recorder's display.

b) Fine tuning the picture (if necessary)

▶ or ◀

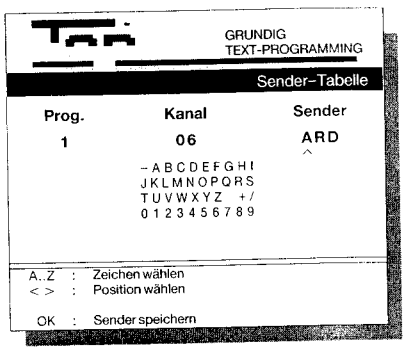
It is only necessary to do this operation if the picture quality is poor or the VPS-display on the recorder flickers or goes out.

The picture contours will appear softer or harder.

Press these buttons on the remote control unit	You will see this on your TV screen	Explanation

c) Storing the settings

OK



For stations that transmit a VPS signal, the station identification abbreviations (e.g., ARD) will automatically be stored in the recorder.

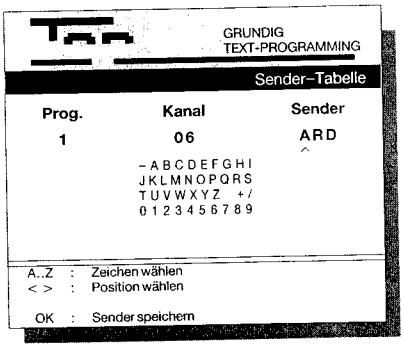
4. Station abbreviations ...

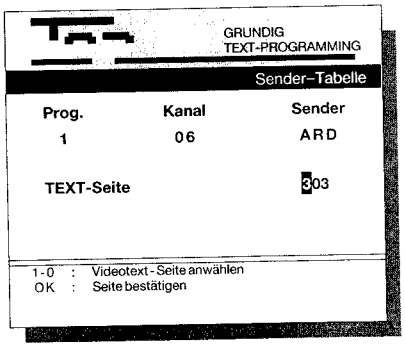
a) confirm or b) new entry (max. 4 places)

A ... Z

1 ... 0

OK OK





Only capital letters can be entered.

The "Station Table" will list the letters/characters that can be used.

If you need to put in a space, press the SPACE button.

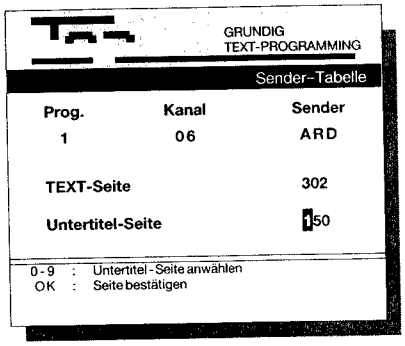
You can move the cursor to the left or to the right with the ◀ or ▶ buttons.

5. Teletext page number ...

a) confirm or b) new entry (3 places)

1 ... 0

OK OK



In our example, the buttons 3 0 2, page 302.

▶▶

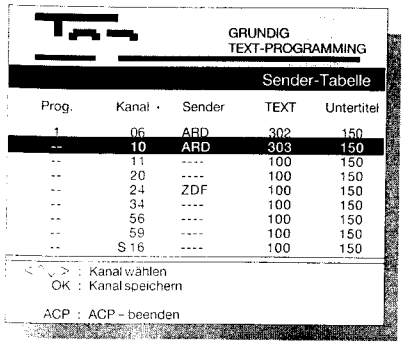
Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

6. Subtitle page number...

a) confirm or b) new entry (3-digit)

[1] ... [0]

[OK] [OK]


GRUNDIG
TEXT-PROGRAMMING
Sender-Tabelle
Prog. Kanal Sender TEXT Untertitel
1 06 ARD 302 150
-- 10 ARD 303 150
-- 11 ---- 100 150
-- 20 ---- 100 150
-- 24 ZDF 100 150
-- 34 ---- 100 150
-- 56 ---- 100 150
-- 59 ---- 100 150
-- S 16 ---- 100 150
< ^ v > : Kanal wählen
OK : Kanal speichern
ACP : ACP - beenden

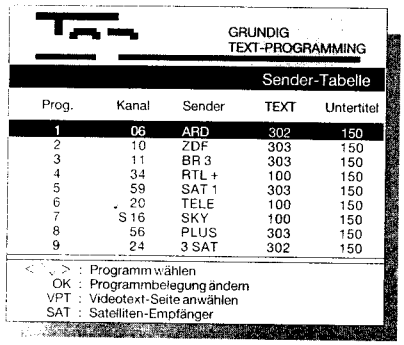
In the example, page 150 was confirmed.
After making this setting, you will end the setting procedure.
The "Sender-Tabelle" (Station Table) will reappear. To continue setting other TV programmes, start the instructions over, starting with point 2.

Double check to see if all the desired channels are allocated to the programme positions.
Channel numbers not allocated will be completely erased.

7. To exit the ACP function

[ACP]

(on the recorder)


GRUNDIG
TEXT-PROGRAMMING
Sender-Tabelle
Prog. Kanal Sender TEXT Untertitel
1 06 ARD 302 150
2 10 ZDF 303 150
3 11 BR 3 303 150
4 34 RTL + 100 150
5 59 SAT 1 303 150
6 20 TELE 100 150
7 S 16 SKY 100 150
8 56 PLUS 303 150
9 24 3 SAT 302 150
< ^ v > : Programm wählen
OK : Programmbelegung ändern
VPT : Videotext-Seite anwählen
SAT : Satelliten-Empfänger

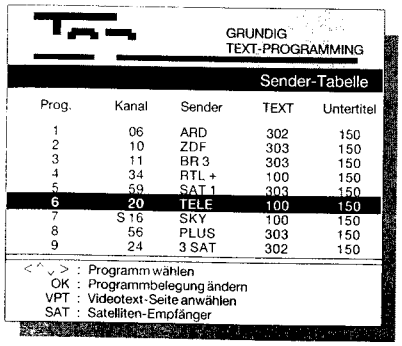
8. Erasing programme position data when it is no longer needed

a) Selecting a programme position

[▼] or [▲]

b) Erasing data

[CL]


GRUNDIG
TEXT-PROGRAMMING
Sender-Tabelle
Prog. Kanal Sender TEXT Untertitel
1 06 ARD 302 150
2 10 ZDF 303 150
3 11 BR 3 303 150
4 34 RTL + 100 150
5 59 SAT 1 303 150
6 20 TELE 100 150
7 S 16 SKY 100 150
8 56 PLUS 303 150
9 24 3 SAT 302 150
< ^ v > : Programm wählen
OK : Programmbelegung ändern
VPT : Videotext-Seite anwählen
SAT : Satelliten-Empfänger

The programme position is empty and can be occupied.

9. Terminate setting mode

[⏻]

You will see the current TV programme.

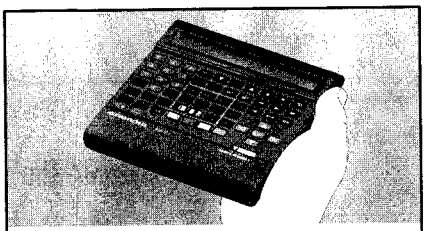
Setting the TV Programme By Entering the Channel Number Variant 2

Preparation

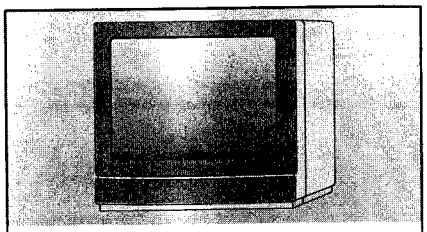
Turn on the TV set.

Select the AV programme position for the recorder on the television set.

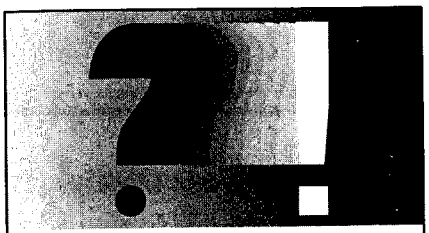
You can double check the setting on the TV screen.



Press these buttons on the remote control unit



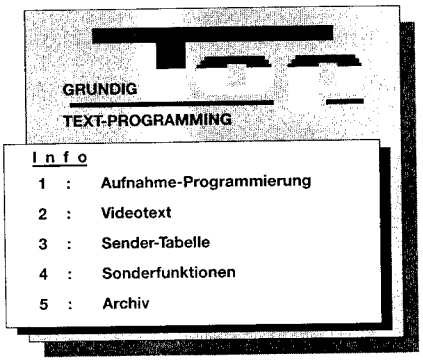
You will see this on your TV screen



Explanation

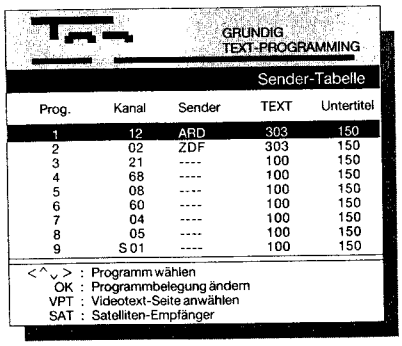
1. Calling up the Info menu

INFO



2. Select the station chart

3



Programme position 1 is underlined in blue.

The first programme positions are occupied with channel numbers, station abbreviations and Teletext page numbers.

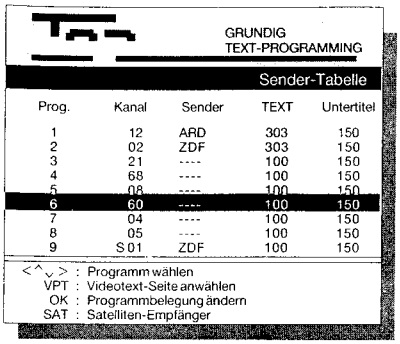
If you only want to change the Teletext page number or the subtitles page, press the VPT button and continue on with point 7.

If you want to enter satellite programmes, press the SAT button and the "Sender-Tabelle SAT" (Station Table SAT) will appear, (blue-coloured).

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

3. Selecting the programme position

▼ or ▲

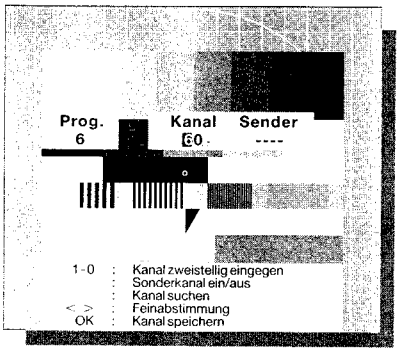


A blue line marks the selected programme position.

To go to other menus of the station tables press the ▶ button.
You will see the consecutive station tables for the programme positions 10-19, etc. up to 90-99 (for satellite programmes from 80-99).

4. Changing the programme allocation of a programme position

OK



The programme position data will appear on the screen. A cursor (▮) will mark the first place of the channel number.

If you watch a TV programme that is transmitted with another colour norm (SECAM colour norm), "SEC" will also appear in the recorder's display.

Channel numbers are not required for satellite programmes. Continue on with point 6.

5. Entering the channel number

or or

a) for TV programmes

1 ... 0

OK

b) for cable TV programmes

(green)

1 ... 0

OK

c) Starting ACP

(blue)

When a TV programme is found, the picture and the programme date appear on the screen.

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

6. Station abbreviations

a) confirm OK

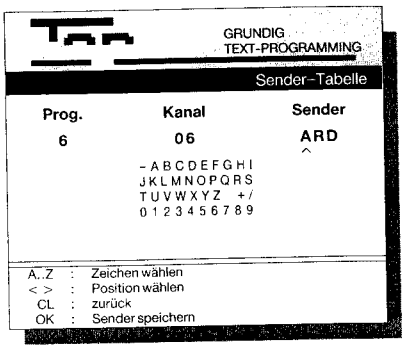
or

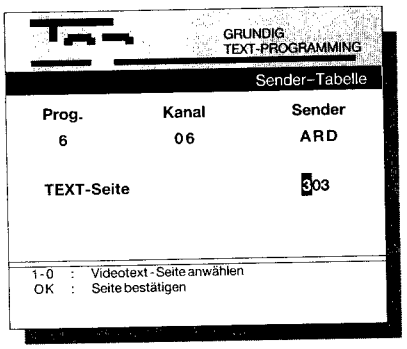
b) new entry (max. 4 places)

A ... Z

1 ... 0

OK


GRUNDIG
TEXT-PROGRAMMING
Sender-Tabelle
Prog. Kanal Sender
6 06 ARD
- A B C D E F G H I
J K L M N O P Q R S
T U V W X Y Z + /
0 1 2 3 4 5 6 7 8 9
A..Z : Zeichen wählen
< > : Position wählen
CL : zurück
OK : Sender speichern



For satellite programmes, enter the station abbreviations at the same place where you set the satellite programmes in your satellite receiver.

Only captital letters can be entered.

The "Sender-Tabelle" (Station Table) will list the letters/characters that can be used.

If you need a space, press the SPACE button.

With the ◀ or ▶ buttons you can move the cursor to the right or to the left.

With the CL button, you can switch back to entering channel numbers.

When setting satellite programmes, the "Sender-Tabelle" (Station Table) will reappear after the last place of the station abbreviation.
Continue on with point 3.

7. Teletext page number...

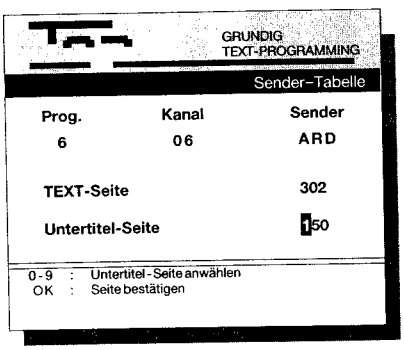
a) confirm OK

or

b) new entry (3 places)

1 ... 0

OK



In the example, press the buttons 3 0 2 page 302.

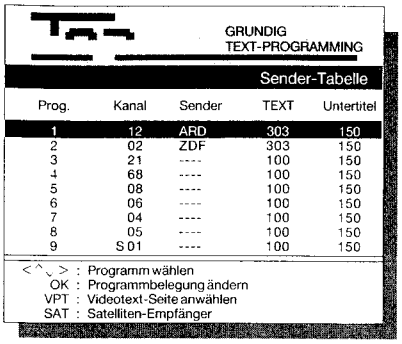
Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

8. Subtitle page number...

a) confirm or b) new entry (3 places)

[1] ... [0]

[OK] [OK]



In the example, the subtitle page 150 was confirmed.

After this setting, the entries for the programme positions are ended.

The station table will reappear. To continue with setting TV programmes, continue on with point 3.

If you wish to erase the data in one of the programme positions, continue on with point 9.

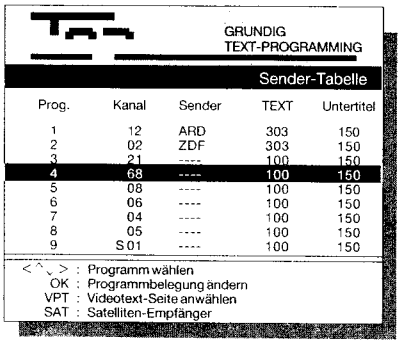
9. Erasing programme position data when it is no longer needed.

a) Select the programme position

[▼] or [▲]

b) Erase Data

[CL]



The programme position is free and can be occupied.

10. Terminate positioning

[⏻]

You will see the current TV programme.

3. The Cassette

The S-VHS and the VHS Videocassette

- Any VHS cassettes you already have can be used with this recorder.

S-VHS cassettes can be played using either the S-VHS format or the VHS format.

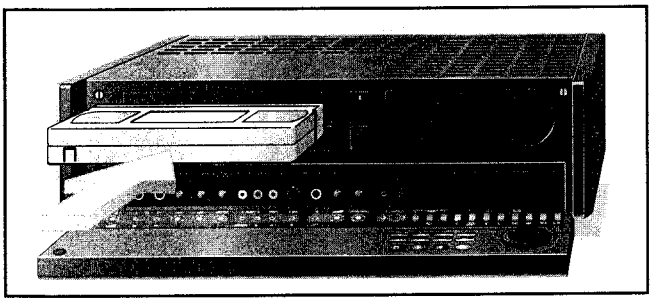
This recorder automatically determines the correct format when cassettes are played.

S-VHS recordings cannot be played on a VHS recorder.

Cassette Recognition

Open the front flap of the recorder.

Push the cassette (with the window facing up and the writing readable) into the cassette compartment until it is automatically pulled in.



The recorder will determine the cassette format (VHS or S-VHS) and will automatically switch to the corresponding cassette format.
If a S-VHS cassette is being used, S VHS will appear in the recorder's display.

Cassette Playing Time

After the cassette has been inserted, the recorder measures the tape time (display indication ATTS) and displays the total playing time in hours if a standard hours cassette is being used (e.g. C3).

Display of total playing time

Cassette	Indication on the recorder
E 60 (60 Min.)	C1
E 120 (120 Min.)	C2
E 180 (180 Min.)	C3
E 240 (240 Min.)	C4

If a 5-hour E 300 cassette is used, it is necessary to enter the total playing time so that the correct total playing time and elapsed playing time are shown.

After starting a tape run function, the elapsed playing time will be shown in hours and minutes.
For example, the display indication: 0:01 appears on the recorder after 1 minute of playing time.
If non-standard cassettes are used, the recorder will automatically switch to the 5-digit tape length indicator.
The display indication: 0:00:10 will appear on the recorder.

Entering the total playing time

The total playing time (in minutes) can be entered for all cassettes.

Enter the total playing time with the buttons [1] ... [0] on the remote control handset and confirm the entry with the [⏺] button.

E.g. [0] [3] [0] [⏺] for a cassette with a playing time of 30 min.,
[1] [9] [5] [⏺] for a cassette with a playing time of 195 min.

This also applies to exceptions where the tape length indication and the indication of total playing time differ.

Switching over to 5-digit tape length display

Press the [⏺] button.
A 5-digit number will appear in the recorder's display.

The tape length indication can be set to 0:00:00 by pressing the [0] button and then the [⏺] button.

If the tape is rewound further back than the 0:00:00 indication, a minus sign will appear in front of the first digit.

If the tape length indicator stops during a tape run function, nothing has been recorded on that portion of the tape.

When the cassette is inserted, the tape length indicator will automatically set to 0:00:00.

To switch back to the display of the total and elapsed playing time, press the [⏺] button.

▶▶

3. The Cassette

Entering the Cassette Number

After a cassette has been inserted and measured, the following indications could appear:

a) Display indication for cassettes not listed in the archive or entered at a later date, e.g.:
C3 ---- = Total playing time
CASSNº = Prompt to enter the cassette number

In order to be able to use the archive system, you must enter three-digit cassette numbers with the buttons [1] ... [0] (for example [0] [3] [0] for cassette no. 30) and confirm it with the [⏎] button.
If the indication E---- appears after the cassette number has been entered, there isn't an entry in the archive yet and the total playing time of the cassette has to be entered (see the "Entering the total playing time" section on the preceeding page).

b) Display for archived cassettes, e.g.:
C3 0:00 = Total playing time, elapsed playing time
Nº 100 = Cassette number

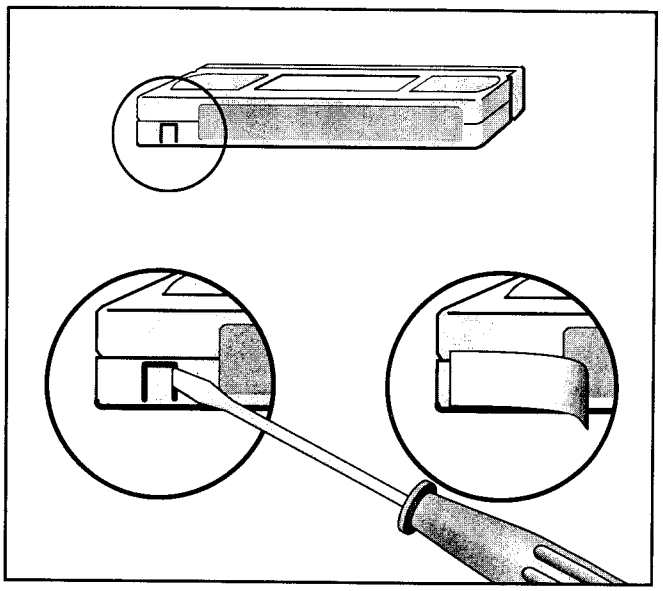
A listing of the contents of the cassette can be seen on the TV screen.

To switch to the television picture press the [⏎] button.

When the recorder is in the stop position, you can call up the cassette number, the total playing time and the elapsed playing time of the inserted cassette with the [⏎] button.

Protecting Recordings from Unintentional Erasure

Every time a recording is made, anything already on the cassette is automatically erased. Therefore, recordings can be protected against unintentional erasure.
To do this, break off the tab on the side of the cassette.
If you want to record over the cassette at a later date, cover the opening with a piece of tape.



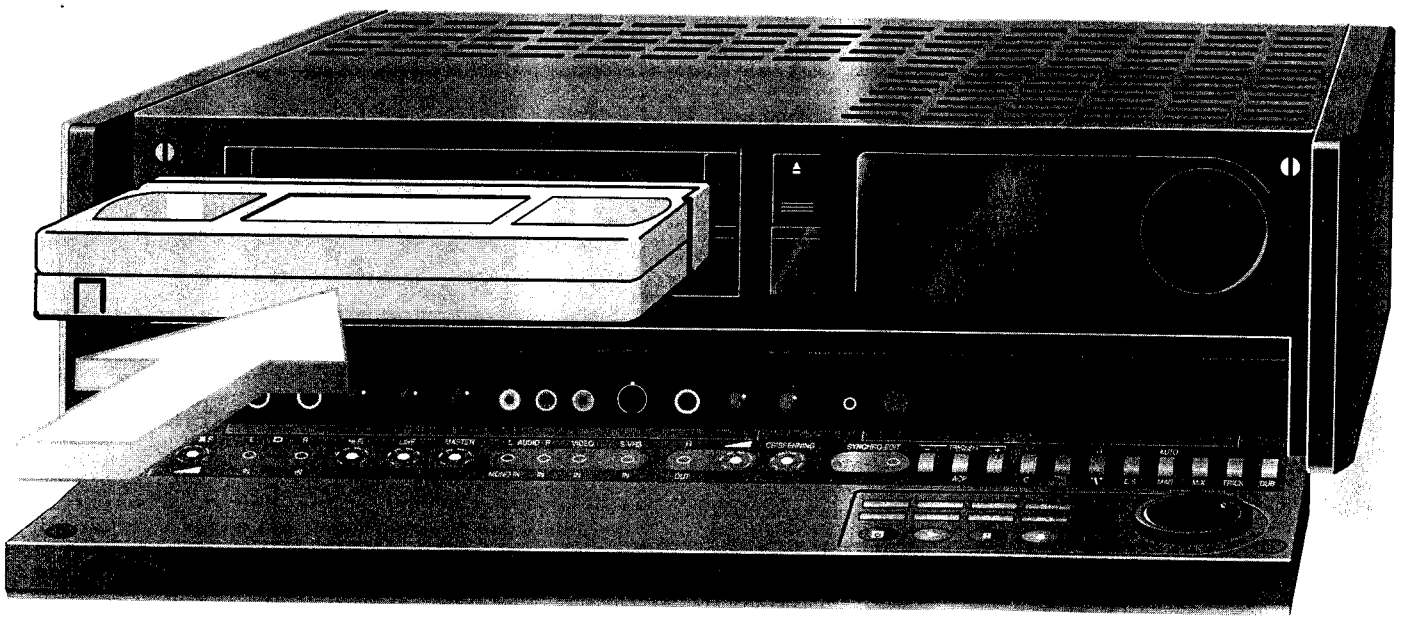
4. Playback Basic Function

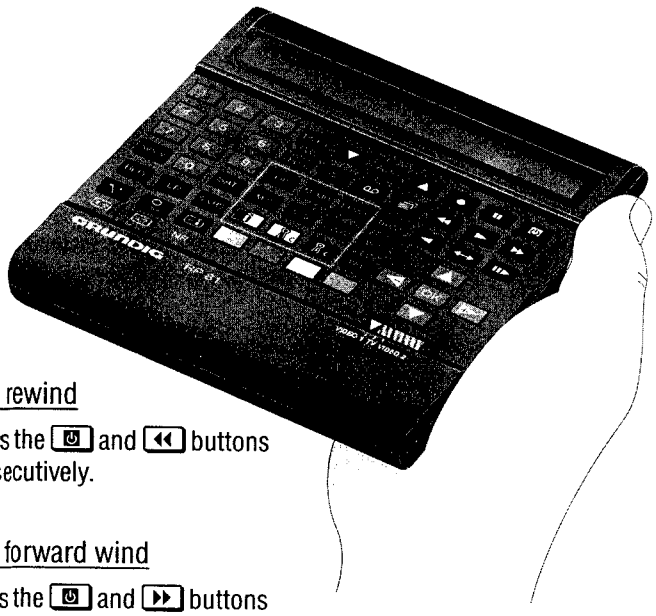
Playback at a Glance

Playback operation is possible with the buttons on the remote control handset or with the controls on the recorder.

Open the front flap of the recorder.

Insert the cassette you want to play in the cassette compartment. It will be pulled in automatically. The recorder will then determine the length of the cassette (display indication: ATTS) and the cassette format (S-VHS or VHS).
The recorder will then request a cassette number (display indication: CASS NO----). You only have to enter the cassette number if you want to use the archive system (see the explanation for using the archive system in the second part of the operating instructions on page 4).





Fast rewind

Press the ⏻ and ⏪ buttons consecutively.

Fast forward wind

Press the ⏻ and ⏩ buttons consecutively.

For further tape wind functions, see pages 31 to 32.

Playback

Press ▶.

Pause/freeze-frame

To stop playback, press ⏸.

To resume playback, press ▶.

STOP

Press ⏻, all functions are stopped.

Cassette removal

Press ⏏ on the recorder.

For detailed playback functions, refer to pages 27 to 30.

4. Playback general

Optimizing Picture/Sound Quality

Automatic

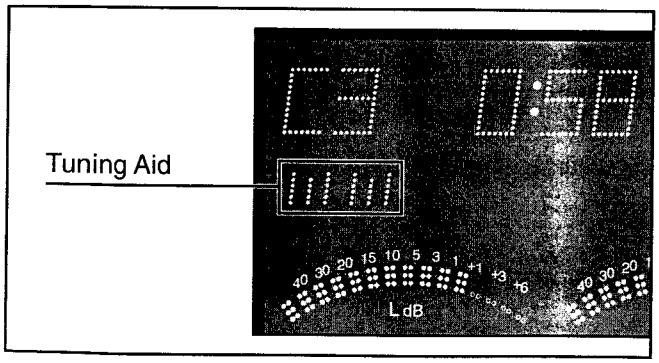
After the cassette has been inserted and playback started, the recorder adjusts automatically to the best picture quality (Auto Tracking).
During this process the "AUTO-T" display lights up on the recorder and picture and sound quality can change.

If there are several recordings made with different recorders on one cassette, it might be necessary to activate the auto tracking again. To do this, press the AUTO button at the beginning of the recording.

Manual

The tracking can also be adjusted with the ▼ PROGRAM/ TRACKING ▲ buttons.

If there is a recording on the hifi (helical) track, a tuning aid will appear in the recorder display under the playing time. The more vertical lines that are lit up, the better the playback quality.



If the picture skips or scrolls on recordings taped with another recorder, press the 8 5 1 1 buttons and then press the OK button.

Coloured Noise Suppressor

This "filter" tones down the picture colour surfaces.
It is recommended to turn off the coloured noise suppression function when recording from this recorder onto another recorder. To do this press the C button on the recorder or press the NR (ED) button on the remote control handset.
You will see this temporary display indication on the recorder: NR OFF.

Every time you change a cassette, this function is automatically turned on.
You can also activate the function manually by pressing the C button on the recorder or the NR (ED) button on the remote control handset again.
You will see this temporary display indication on the recorder: NR ON.

Optimizing Picture Sharpness (Crispening)

By pressing this knob, the CRISPENING adjuster will rest in the out position.
Set the picture sharpness according to your preference.

Playback of Longplay Recordings

When playing a longplay recording, the recorder automatically switches to longplay playback mode.
The indication: LP will appear on the recorder. When in slow motion, freeze-frame or picture search, there might be interference with the colour playback.

Selecting the Sound Track

When playing cassettes on which stereo or two-channel recordings have been made, you can select the desired sound track.

Stereo (hifi helical track) = basic setting

The indication: ∞ will appear on the recorder.

Consecutively pressing the 1 button, selects:
Sound track 1 – indication 1 will appear on the recorder.

Sound track 2 – indication 2 will appear on the recorder.

Mono/longitudinal track – no indication.

Mix option (hifi helical track, mono longitudinal track) – the indication: MIX will appear on the recorder.

Basic setting – the indication: ∞ will appear on the recorder.

The sound is independent of the ○ hifi and ○ LINE controls setting (on the recorder) when in mix mode.
The sound balance between the hifi helical track and the mono longitudinal track can be adjusted with these controls.
Press in the controls to set them in the out position.

You can complement playback with the mix option. To do this attach a microphone to the L R IN jacks. You can change the volume with the control ○.

If the control is in the out position, right channel,
When in the out position and pulled even further out, left channel.

This recorder is equipped with numerous comfort functions for playback.

These comfort functions can be controlled easily with the buttons and the "jog" wheel (inner wheel) and the "shuttle" ring (outer ring) on the front panel of the recorder, and with some buttons on the remote control handset.

These comfort functions are optimized for use and very helpful if you wish to electronically edit your recordings (joining or inserting new pictures or passages to or into already existing recordings).

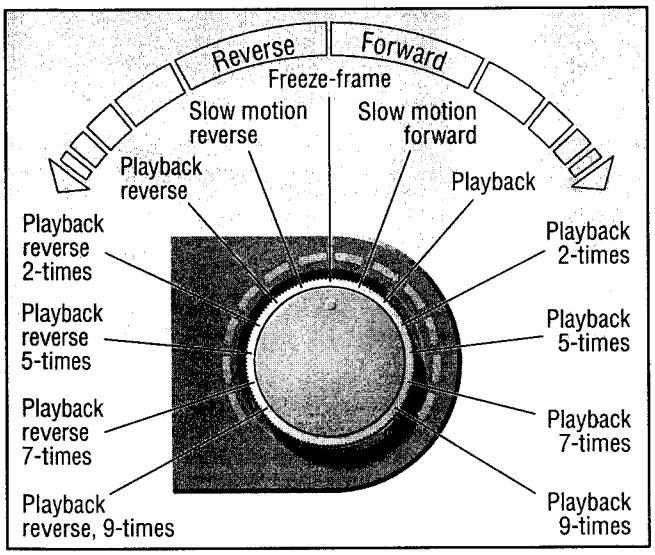
The following adjustment can be made:

Playback speeds – forward or reverse – with the shuttle ring.

Freeze-frame stepping – forward or reverse – with the jog wheel.

Step-by-step selection of the slow-motion speeds – forward or reverse – with the jog wheel.

Different Playback Speeds

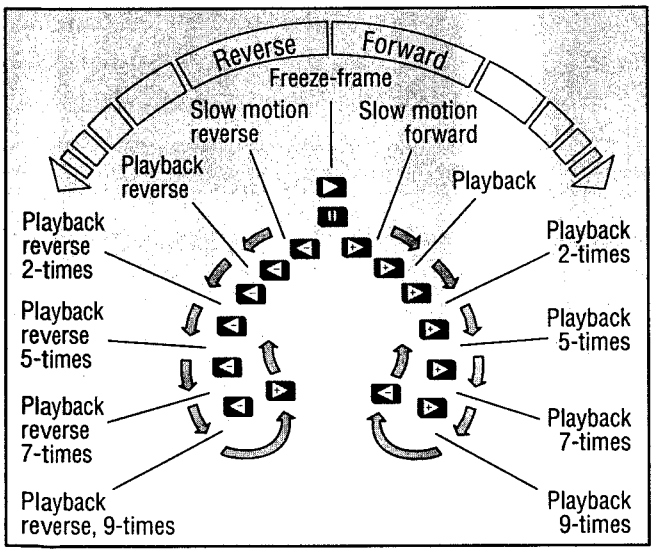


With the recorder shuttle ring

You can freeze the picture (playback-pause) by operating the shuttle ring during playback.

You can increase (or decrease) the speed of fast forwarding or rewinding up to a maximum of 9 times normal speed (see illustration) with the shuttle ring.

By turning the shuttle ring in the reverse direction, you can reset it on any desired playback speed.



With the remote control handset

Switch the recorder to freeze-frame mode (playback-pause) by pressing the button ▶ and then the button ⏸.

Adjust the desired direction and speed of playback with button ◀ or ▶ (see figure).

If the picture trembles or appears unsteady during the playback functions freeze-frame, slow motion forward, and playback 2-times forward, you can optimize the picture quality.

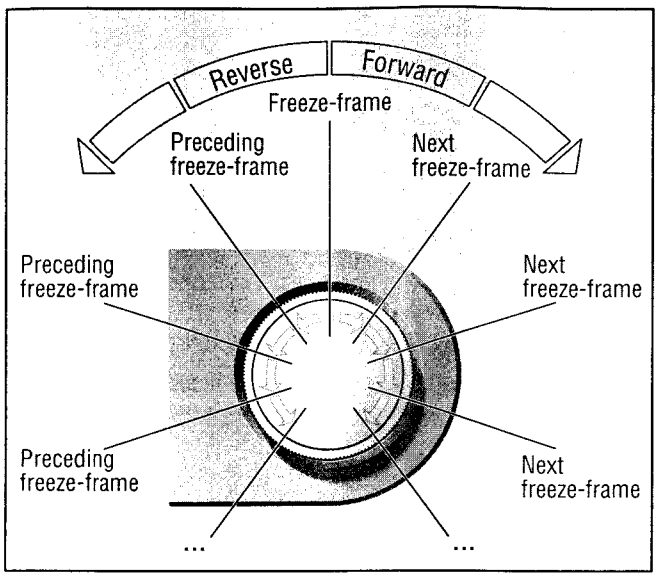
Press the numbered buttons 8 5 2 8 and then the button OK on the remote control handset.

A7 appears in the display of the recorder.

Now adjust for subjectively best picture impression with button ▲ or ▼, and then press the button OK.

▶▶

Forward or Reverse Freeze-Frame Stepping



With the jog-shuttle of the recorder

During playback, switch the recorder with the shuttle ring to freeze-frame mode (playback-pause).

With the help of the jog wheel, you now can examine each individual preceding or following freeze-frame (see figure).

The indication JOG ▯▯ appears on the recorder.

Depending on the direction of rotation, each indexed position switches to the preceding or following freeze-frame.

Here again, you can select any desired playback speed with the help of the shuttle ring.

With the remote control handset

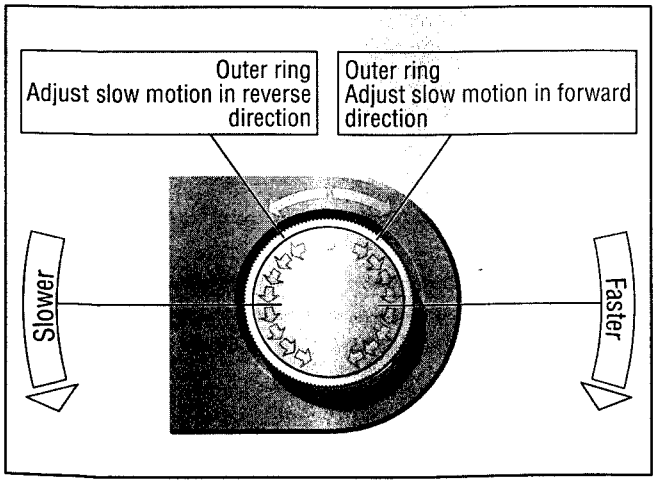
Press the ⏸ button twice during playback.

The display indication JOG ▯▯ will appear on the recorder.

Press the ▶ button to step to the next freeze-frame. Repeatedly pressing this button advances the frames one by one. Press the ◀ button to step back to the preceding freeze-frame. Repeatedly pressing this button rewinds the frames one by one.

Press the ▶ button to return to normal play.

Adjusting the Slow-Motion Speed in Forward, or Reverse Direction



With the jog-shuttle of the recorder

During playback, switch the recorder with the shuttle ring to forward or reverse slow motion.

The slow motion speed can be increased or decreased during playback with the jog wheel (see illustration).

The following indication will appear in the display:
– SLOW + ◁▯▯ or – SLOW + ▯▯▷

Depending on the direction of rotation, each indexed position of the wheel will increase or decrease the speed by one step.

Here again, any desired playback speed can be adjusted with the shuttle ring.

Using the remote control handset

Forward slow motion

Press the [II▶] button during playback to select this function.

The display indication: ▯▯▷ appears on the recorder.

Reverse slow motion* .

Press the [II] button and then the [◀] button during playback to select this function.

The display indication: ◁▯▯ appears on the recorder.

Modifying the slow-motion speed

Press the [II▶] button while in the slow-motion mode.

The slow motion speed will decrease.

The additional display indication: – SLOW + appears on the recorder.

Repeatedly press the [◀] button to decrease the slow-motion speed little by little.

Repeatedly press the [▶] button to increase the slow-motion speed little by little.

To return to normal slow-motion speed, press the [II▶] button.
To return to normal playing speed, press the [▶] button.

Playback-Pause/Freeze-Frame

The freeze-frame (pause) status is limited to a certain length of time. After the time is up, the recorder switches to stop.

Press the [II] button during playback.

The display indication: ▯▯ appears on the recorder.

To return to play, press the [▶] button.

Digital Freeze-Frame

Press the [STOP] button during playback.
A freeze-frame will appear on the TV screen, the playback continues to "run", but cannot be seen.

To continue playback, press the [CL] button.

Reverse Play*

Press the [◀] button during playback.

The display indication: ◁ appears on the recorder.

Press the [▶] button to switch back to play.

Forward Picture Search*

(7-times normal playback speed)
Press the [▶▶] button during playback.

The display indication: ▷▷ appears on the recorder.

Press the [▶] button to return to normal playback.

Reverse Picture Search*

(7-times normal playback speed)
Press the [◀◀] button during playback.

The display indication: ◁◁ appears on the recorder.

Press the [▶] button to return to normal playback.

* with interference pattern.

5. Fast Tape Wind and Search Functions

Fast Tape Wind

There are two possible methods for fast winding the tape:

With the buttons of the remote control handset, or
with the shuttle ring on the recorder.

Fast tape wind with the remote control handset

Press the button [⏻].

Press button [⏩] for fast forward wind.

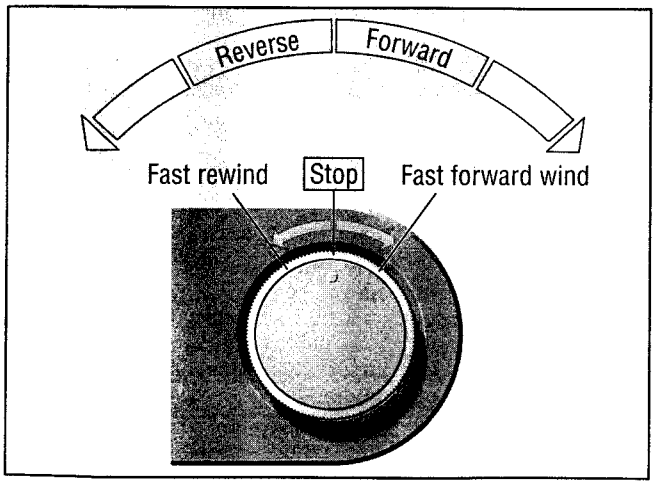
Press button [⏪] for fast rewind.

At the beginning or the end of the tape, the recorder switches to stop.

Press button [⏻] to stop the fast wind functions.

Fast tape wind with the shuttle ring on the recorder

Press the [⏻] button.



Edit Search Function

With this function, the recorder searches for the electronically marked places on the cassette (see the "Marking Specific Scenes in the Recording" chapter, page 35).

Press the E-S button on the recorder.

The recorder starts to rewind, searches for the next electronic marker and then switches to playback-pause.

The Go-To Function

With this function, you can automatically wind the tape to a certain position.

There are two ways to do this:

By entering the elapsed playing time, or
by entering the tape position.

Go-to by entering the elapsed playing time

If the display of the recorder is in the tape length indication mode, press button [⏲] to switch it to the playing time indication mode.

Enter the playing time (e.g., 48 minutes) as three figures with the numbered buttons [1]...[0] and then press the button [↔].

When the last entry is completed, the tape is wound to the respective tape position and playback is started.

> For selecting the elapsed playing time with non-standard hours cassettes, you must first enter the total playing time with the numbered buttons [1]...[0] and confirm the entry with the buttton [⏲].

Go-to by entering the desired tape position

If the display of the recorder shows the playing time, press the button [⏲] to switch to the tape length indication mode.

Enter the desired tape position with the numbered buttons [1]...[0] as three figures (the last two figures must be omitted).
Press the button [↔] to start the go-to function.

> If you wish to wind the tape to a negative tape position, then you must enter this by pressing the button [◀].

1st example: The tape is at position 1 : 30 : 24
Desired tape position = 0 : 50 : 25
Entry = [0] [5] [0] [↔]

2nd example: The tape is at position − 1 : 05 : 34
Desired tape position = − 0 : 45 : 30
Entry = [0] [4] [5] [◀] [↔]
When the last entry is completed, the tape is automatically wound to the desired position and playback is started there.

5. Fast Tape Wind and Search Functions

Automatic Programme Finder (APF System)

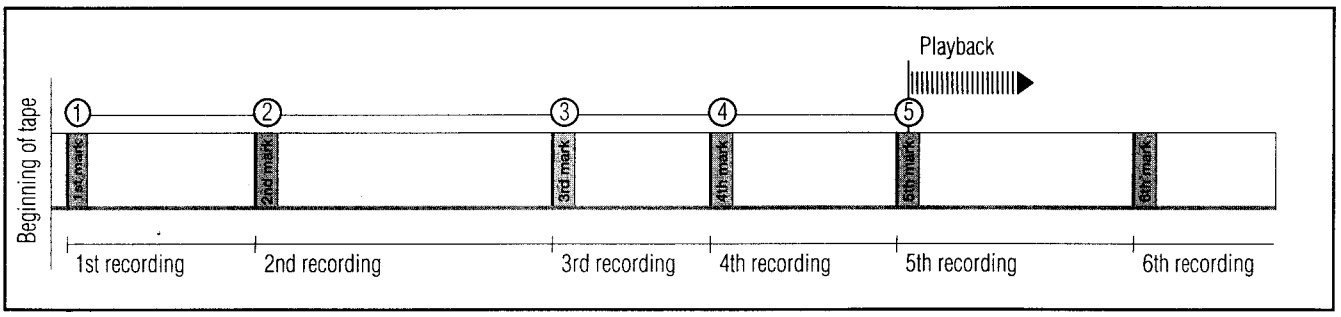
With this system, you can quickly and accurately find the beginning of any of your own recordings.

For this, electronic "marks" (VISS marks) are automatically set at the beginning of each of your own recordings.
These marks are always in relation to the beginnning of the tape.

Example:

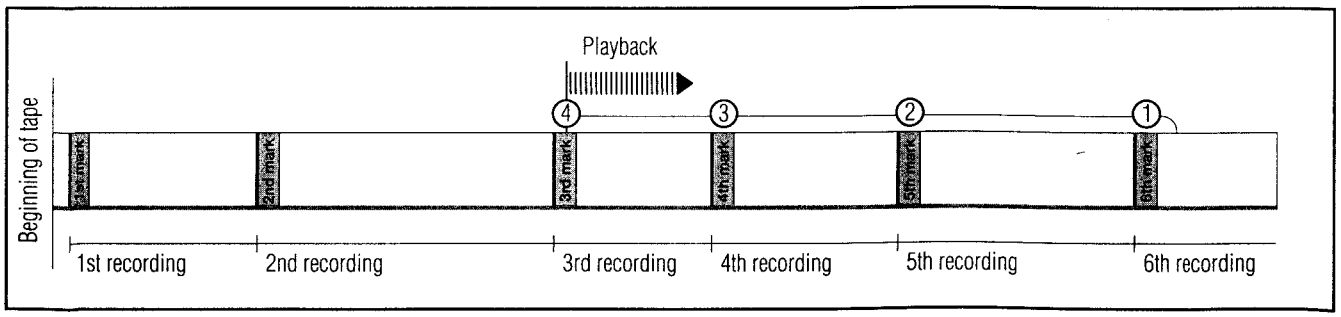
The tape is wound to its beginning and you wish to see the 5th recording. Press the numbered button [5] for the 5th mark and then the button [⏩].

The indication 5 APF ≫ appears on the recorder.
The tape is automatically wound to the beginning of the 5th recording and playback is started there. During the search run, the unpassed marks will be displayed.



If you wish to see the 3rd recording – in relation to the beginning of the tape – after the 5th recording (= 6th mark), then you must go back three recordings (= 4 marks).
For this, press the numbered button [4] and then the button [⏪].

The indication 4 APF ≪appears in the display.
The tape is automatically rewound to the beginning of the 3rd recording and playback is started there. During the search run, the unpassed marks will be displayed.



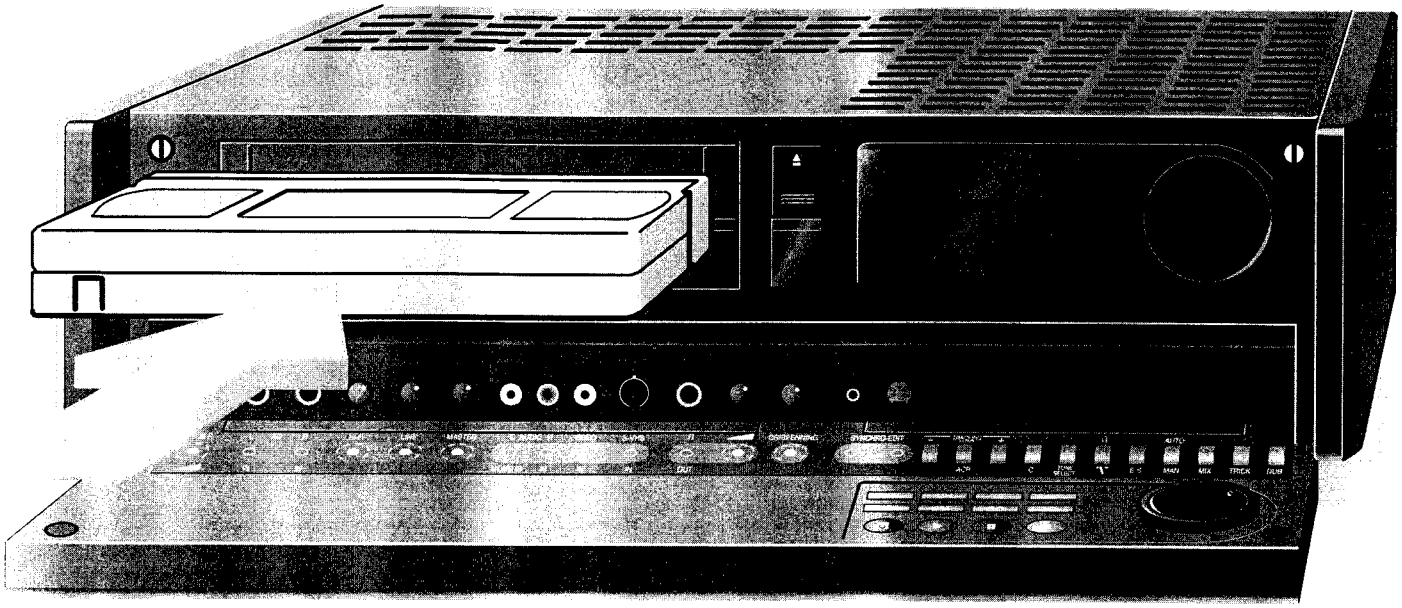
6. Immediate Recording

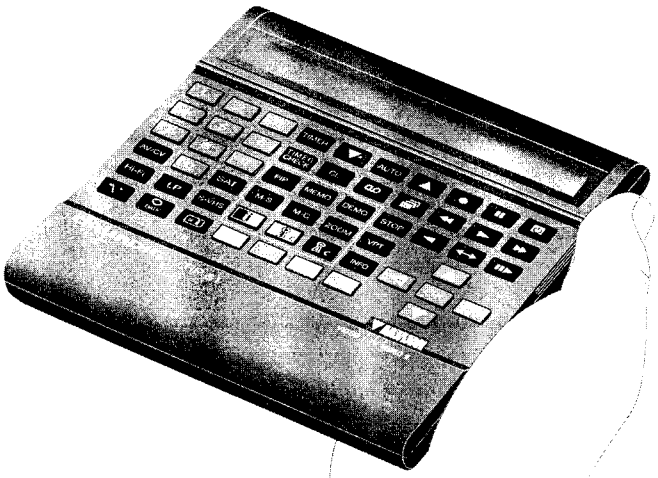
Recording at a Glance

You can make recordings either with the help of the remote control buttons or with the controls on the recorder.

Open the front flap of the recorder.

Insert a cassette with sufficient playing time in the cassette compartment. It will be pulled in automatically. The recorder will then determine the length of the cassette (display indication: ATTS) and the cassette format (S-VHS or VHS).
The recorder will then request a cassette number (display indication: CASS NR---). You only have to enter the cassette number if you want to use the archive-system (see the explanation for using the archive-system in the second part of the operating instructions on page 4).





Fast rewind

Press the ⏻ and ◀◀ buttons consecutively.

Fast forward wind

Press the ⏻ and ▶▶ buttons consecutively.

For a detailed description of the recording functions, refer to the pages 34 to 37.

Selecting a programme position, step by step

Press button ▼ PROGRAM ▲ on the remote control handset,

or

use the jog wheel on the recorder.

Starting recording

Press the button ● for a longer time.

"STOP" will flash several seconds in the recorder display.
If you wish to enter a stop time, refer to chapter "Entering a Stop Time", page 34.

Interrupting recording

Press button ⏸.

To continue recording

Press button ●.

Terminating recording

Press button ⏻.

Remove the cassette

Press ⏏ on the recorder.

6. Immediate Recording

Preparation

Turn on the TV set.

Select the AV programme position for the recorder on the television set. This can be used as a control monitor.

Open the front flap of the recorder.

Insert a cassette with sufficient playing time that can be recorded on/over.

The recorder will automatically determine if S-VHS or VHS cassettes are being used.
If you want to record in VHS on an S-VHS cassette, press the S-VHS button (the indication S VHS will disappear).

Pay attention to the following points if you wish to use the archive system:
If the indication CASSN?---- appears in the display after a cassette has been inserted, you must enter the cassette number (see page 25).
If the cassette has already been archived, press the button to call up the cassette number, the total playing time and the elapsed playing time. After the recording starts, the recorder automatically stores the starting and stopping points of the tape, the date, "DIVERS" (MISC) for the category, the station abbreviation and the starting time under the title, in the archive. The title and category can both be changed after the recording is finished (see the second part of the instruction manual, chapter "Enquiring about the Cassette Contents..." starting page 15).

Selecting a Programme Position – Direct

Programme positions which are not occupied by a programme cannot be selected.

TV programme from the aerial/cable hook-up

Enter the desired TV programme (one- or two-digit) with the buttons 1 ... 0, and then press the PROGRAM ▲ button,

or

TV Programme from the satellite receiver

Enter the desired TV programme (one- or two-digits) with the buttons 1 ... 0, then press the SAT button and the PROGRAM ▲ button.

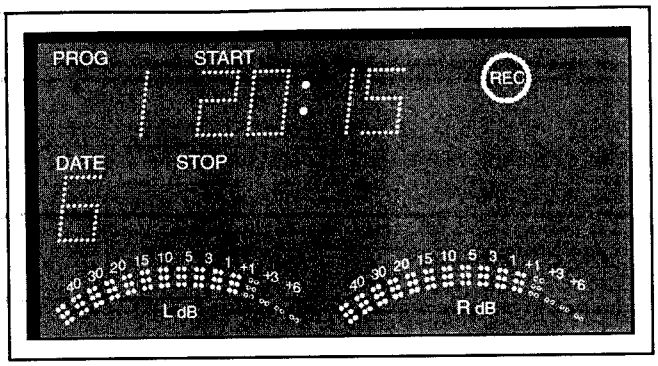
The selected programme can be seen on the TV screen.

Selecting the Longplay Mode

To double the playing time of the cassette, press the LP button.
The indication on the recorder will be: LP.

Starting Recording

Hold down the ● button longer. Recording begins and, for example, the following appears in the display:



PROG 1 = Programme position 1 selected
START 20:15 = Current time
REC = Record indicator
DATE 6 = Date, in the example, the 6th day of the month
STOP = blinking, prompts the user to enter the stop time.

Entering the Stop Time

If a stop time is not entered, the indicator will switch over to the hour and minute indicator after a short time and the recording will continue until the tape runs out.
Then the recorder automatically rewinds the tape and then switches to stop.

There are two ways to enter the stop time:
Entry exactly to the minute
Entry in 30-minute segments

Entry exactly to the minute of the stop time

Enter the desired stop time (four places) with the buttons 1 ... 0 and confirm with the ● button.

If the recording is stored in the archive, the cassette number will appear for a short time in the display.
The remaining playing time, the elapsed playing time, the programme position and the station acronym will be shown afterwards.

▶▶

6. Immediate Recording

Entering the stop time in 30-minute segments

Enter the desired stop time by repeatedly pressing the ● button (max. 10 times = 300 minutes).

After a few seconds the elapsed playing time, the programme position and the station abbreviation will be displayed.

Changing the stop time

If you want to change the stop time while recording, press the ● button, enter the stop time with the buttons 1 ... 0 and confirm this with the ● button, or press the ● button as many times as are necessary until the desired stop time has been reached.

Marking Specific Scenes in the Recording

During recording, you can mark certain scenes which can then be quickly found during playback.
To do this press the ▯ MARKE button on the recorder at the beginning of the scene.

Recording-Pause

Press the ⏸ button during recording.

Continue recording by pressing the ⏸ button or the ● button.
The recording-pause function is limited to a certain time. After this time the recorder will switch to stop.

Terminating Immediate Recording

Press the ⏻ button to terminate recording.

Assembly Editing, Assembly Recordings with Clean Joins

During playback, locate the position where you wish to add the new recording, then press the ⏸ button.

Switch the recorder to recording-pause by pressing the ● for a longer time, then select the desired programme with the ▲ PROGRAM ▼ button.
Start the "new" recording by pressing the ● button.
When you play back the assembled recordings, you will see smooth joins without flaws.

Recording the Time and Date

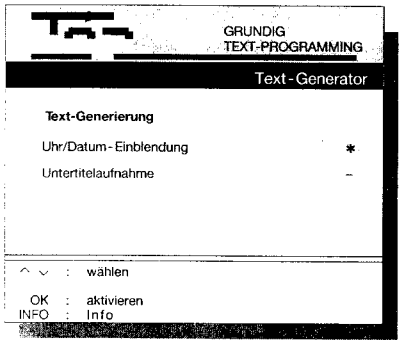
The time and date can be recorded along with each recording. The following "entries" can only be done with the remote control handset.

Call up the "Info" menu with the INFO button.

Select the "Sonderfunktionen" (Special Functions) line from the "Info" menu with the 4 button.

Select the "Text Generator" (Title Generator) line from the "Info" menu with the 1 button.

Select the "Uhr/Datum-Einblendung" (Time/Date Insertion) line with the ▼ button and activate it with the OK button.



A * appears after the "Uhr/Datum-Einblendung" (Time/Data Insertion) line when the function has been activated.

To switch back to the TV picture press the INFO button twice.
Now the time and date will be recorded only with the following immediate recordings or previously programmed recordings. The time/date will appear in the upper right hand corner of the screen.

6. Immediate Recording

Sound Recording Special Features

The different sound tracks

Your recorder has two different recording and playback systems for sound.

The first is the hifi or helical track for stereo and two-channel sound recordings.

The second is the mono or longitudinal track for audio playback on standard VHS recorders, for parallel dubbing and for adding sound at a later date.

When you start to record the sound is recorded on both sound tracks.

Open the front flap of the recorder.

Two-channel TV broadcasts

Both sound channels will always be recorded on the helical sound track.
When recording onto the longitudinal track, either sound channel 1 or sound channel 2 can be recorded.

You can choose between sound channels 1 and 2 with the ☐ TONE SELECT button (on the recorder) or the [\'•] button (on the remote control handset).
The display will indicate either 1 or 2.

You can hear the sound from the TV or with headphones (connect them to the 🎧 OUT jack).

You can choose between channel 1 and channel 2 when using the headphones by pressing the ☐ \'• 🎧 button (on the recorder).

Television broadcasts in stereo

Both sound channels are always recorded on the helical track.
Mono sound is always recorded on the longitudinal track.
When the recording-pause is activated, you can select the sound channel for monitoring.

Basic setting = stereo
The display indication: ∞ appears on the recorder.

Pressing the ☐ TONE SELECT button (on the recorder) or the [\'•] button (on the remote control handset) consecutively chooses the:
left channel, the display indication: 1 appears on the recorder;
right channel, the display indication: 2 appears on the recorder;

basic setting, the display indication: ∞ appears on the recorder.

Monitoring sound with headphones

You can check the different sound tracks of a two-channel broadcast using stereo headphones (plugged into the 🎧 OUT jack).

You can choose between sound track 1 and sound track 2 with the ☐ 🎧 \'• button (only on the recorder).
You can change the headphone volume with the ◢ control (press the knob to set it in the out position).

Recording level, automatic/manual

After having selected the programme (loop-through mode), the recorder automatically sets the recording level.

If you wish to set the recording level manually, press the ☐ MAN AUTO button on the recorder.
The display indication: MAN will appear on the recorder.

Turn the MASTER knob (push the knob to set it in the out position) to the right until the first red indicator (+1 dB) is lit when the sound is at its loudest.

The last level indicators (+3, +6) should not be lit up (sound level is too high).

Start recording by holding down the [●] button.

Parallel dubbing

While making a video recording, you can make an audio recording from an external source, e.g., a concert that is broadcast on television as well as on FM radio.
The radio broadcast will be recorded on the hifi (helical) track and the television sound will be recorded on the mono (longitudinal) track.

Connecting

You can connect an external sound source (e.g., a stereo unit) with a standard phono cable (cinch) to the AUDIO jack on the back of the recorder (refer to the connection diagram in the second part of the instruction manual, page 56).

Recording

Insert a cassette that can be recorded on/over.

Select the TV programme with the buttons [1] ... [0] then press the [Hi-Fi] button and the PROGRAM [▲] button.

Start recording by holding down the [●] button.

During playback, you can select the sound by pressing the ☐ TONE SELECT button (on the recorder) or the [\'•] button (on the remote control handset) several times (display indicator ∞ = radio sound, no indicator = TV sound).

Teletext Pages

Open the front flap of the recorder.

Insert a cassette with sufficient playing time, making sure it can be recorded on/over.

Enter the desired TV programme with the buttons [1] ... [0] and then press the PROGRAM [▲] button.

Press the [INFO] button.
The "Info" menu will appear.

Select the "Videotext" (Teletext) line from the "Info" menu with the [2] button.

Select the desired Teletext page with the buttons [1] ... [0].
The Teletext page will appear on the screen after a short time.

Press the [●] button to start recording.
Other Teletext pages can be selected during recording with the buttons [1] ... [0]. They will be recorded without any interruptions.

Press the [⏻] button to terminate recording.

Recording Subtitles

Some broadcasts have subtitles for the hearing impaired. You can find out the page numbers of these subtitles (in the example page 150) in announcements made before these broadcasts air and in the Teletext pages "CONTENTS", "INDEX", "OVERVIEW" from A-Z, under the letter U (Untertitel = subtitles).

You can also record subtitles broadcast by the television stations.

Open the front flap of the recorder.

Insert a cassette with sufficient playing time, making sure it can be recorded on/over.

Enter the desired TV programme with the buttons [1] ... [0], then press the [▲] button.

Press the [INFO] button.
The "Info" menu will appear.

Select the "Videotext" (Teletext) line from the "Info" menu with the [2] button.
The Teletext page 100 will appear.

Enter the number of the subtitle page with the buttons [1] ... [0].
You will see the subtitles for the desired TV programme on the screen.

Press the [●] button to start the recording.

Press the [⏻] button to terminate the recording.

Activating Subtitles for Immediate Recordings and for Pre-programmed Recordings

You can set your recorder so that subtitles broadcast by TV stations are recorded.

To do this, however, the subtitle page numbers have to have been entered in the station chart (see page 19 and page 23). These Teletext pages will be automatically called up when the programming is being set.

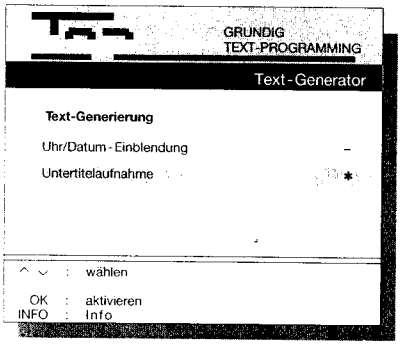
Call up the "Info" menu with the [INFO] button.

Select the "Sonderfunktionen" (Special Functions) line from the "Info" menu with the [4] button.

Select the "Text Generator" (Title Generator) line from the "Sonderfunktionen" (Special Functions) menu with the [1] button.

The "Text Generator" menu will appear.

Select the "Untertitelaufnahme" (Recording Subtitles) line with the [▼] button and activate it with the [OK] button.



A ✱ will appear after the "Untertitelaufnahme" (Recording Subtitles) line when the function has been activated.

Press the [⊟] button to record the subtitles in letters twice normal size.
The "Untertitelaufnahme" (Recording Subtitles) line will appear in the selected size.

Now subtitles will be recorded with every TV programme recorded.

To deactivate the subtitle recording, press the [OK] button again.

To return to the TV. picture, press the [INFO] twice.

7. Recording Programming the Three Variants

The Recorder can be Programmed to Record at a Later Time.

You can pre-programme:

eight broadcasts over a period of twelve months,
daily or weekly broadcasts at the same time,
with or without archiving titles,
with or without VPS control,

in standard or longplay mode,
with or without parallel dubbing.

Instructions on how to record with the VPS signal can be found on the next page.

You can choose between three variants

The Variants	Used ...	Explanation
1 Using the remote control handset and its display, pages 40 to 44	...for all TV programmes that you receive, including stations without Teletext service.	The title has to be entered into the archive at a later time.
2 Quick programming with the VPT button and the TV station Teletext pages, on pages 45 to 49	... for TV programmes with Teletext service	Very quick, easy entry. All data are taken from programme overviews and stored in the recorder. The broadcast titles are stored in the archive by pushing a button. You cannot misprogramme. Cannot be used for TV stations without Teletext.
3 Programming with the remote control handset, the on-screen dialogue and the manual data entry, on pages 50 to 57	... for all TV programmes that you receive, also from TV stations without Teletext service.	Easy entry for TV broadcasts from stations without Teletext and for satellite programmes. You enter data and dialogue lines which will guide you step by step. The programme titles can be "written" into the recorder's archive.

7. Recording Programming

VPS – The Video Programme System

When making timer recordings (record programming), control through the VPS system always ensures that the desired programme is recorded in its entirety.

Therefore, faulty recordings because of time shifts will no longer occur.

Hints for recording with the VPS system

Many TV stations transmit an additional signal (VPS signal) which marks the beginning and the duration of each television broadcast.

It is therefore very important that you enter the start and stop times exactly to the minute when programming your video recorder.

Example:

Beginning of the broadcast: 20.15 hours
End of the broadcast: 21.45 hours
Entries to be made on record programming: 2 0 1 5
and 2 1 4 5.

If television broadcasts might possibly be changed or shifted, then separate VPS times are given in the programme guides, which then must be entered instead of the normal start times of these broadcasts.

Example:

Beginning of the broadcast: 20.15 hours (VPS 20.30 hours)
End of the broadcast: 21.45 hours
Entries to be made on record programming: 2 0 3 0
and 2 1 4 5.

In this case, the recorder will recognize the time shift and switch on only at the actual beginning and switch off at the actual end of the broadcast.

Record programming for several broadcasts on the same day

If you wish to programme recording of several broadcasts on different programme positions on the same day, then you must decide which broadcast you wish to record completely if time shifts should occur.

Example:

You want to record a broadcast on the First Programme from 20.15 to 21.45 hours and a broadcast on the Second Programme from 21.50 to 22.30.
If it turns out that the broadcast on the First Programme lasts 15 minutes longer than expected, then VPS signal control will ensure that your recorder will record this broadcast until 22.00 pm. Only then will the recorder switch to the Second Programme and you will miss the first 10 minutes of the second broadcast.

If you want to record the broadcast on the Second Programme from the beginning, then you have to erase the VPS signal when programming recording of the broadcast on the First Programme. The length of this recording will then be determined by the entered start and stop times.

Recording of the First Programme then will end at 21.45 and the Second Programme will be recorded starting at 21.45.

Record programming for all evening broadcasts of the same programme on the same day

If you want to record all evening broadcasts (e.g., on Saturday starting at 20.15, an entertainment show, the winning Lotto numbers, and a movie) from the same programme (e.g., ARD), then you have to use a separate TIMER position for each of these broadcasts if you want to use the VPS system. Otherwise the VPS signal control will stop recording at the end of the first broadcast.

If you want to record all evening broadcasts (e.g., from 20.15 to 00.15) using only one timer position, then you have to erase the VPS signal when programming.

For confirming or erasing the VPS signal, please refer to the individual programming examples.

With TV stations that do not transmit the VPS signal, recording will be started and ended according to the entered start and stop times only.

If you wish to programme satellite programmes from different satellites, you should select only one programme with VPS.
Reason:
If two satellite programmes from two satellites are programmed with VPS, the satellite aerial would permanently move between the two satellite positions. This could cause damage to the aerial motor.

7. Recording Programming Variant 1

Using the Remote Control Handset to Enter Recording Data, Variant 1

With this variant, you will become acquainted with the conventional way of programming.
You enter the data of the desired broadcast into the remote control handset and the remote control handset display will guide you step by step.
A flashing cursor will prompt you to enter the required data.

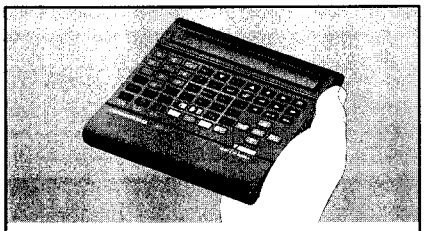
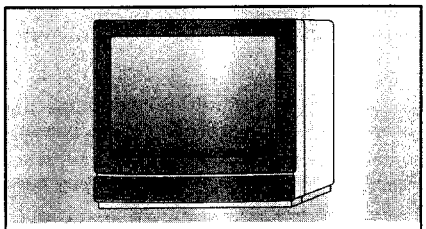
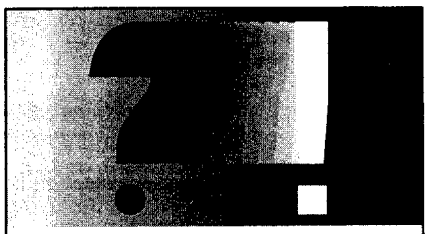
Preparation

Check the time and date on the recorder.

Open the front flap of the recorder.

Insert a cassette with sufficient playing time, making sure it can be recorded on/over.

If CASSN?---- appears in the recorder display, enter the cassette number (three-digit) with the buttons [1] ... [0] and confirm it with the [▭] button. You only have to enter the cassette number if you want to use the archive system.

 Press these buttons on the remote control unit	 You will see this on your TV screen	 Explanation

1. Starting programming

TIMER

The remote control is ready to receive data.

If there is any data still in the display, this must be cleared (see point 2).

If an "F" appears in the remote control handset display, the data was not acceptable (e.g. 32.09. = incorrect date).

2. Clearing the display

CL

TIMER

Now you can enter the "new" recordin data.

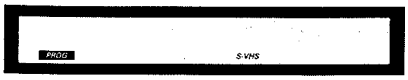
Recording Programming Variant 1

Press these buttons on the remote control handset	This will appear in the remote control handset display	Explanation

3. VHS recording on S-VHS cassette

Press the button S-VHS on the recorder.

S VHS in the display of the recorder goes out.



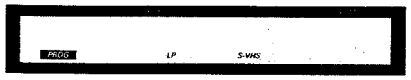
The indicator S-VHS in the display of the remote control handset has no effect on the recording.

4. Longplay recording

a) yes

LP

b) no



The cassette's playing time is doubled in the longplay mode.

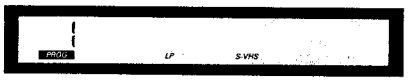
5. Entering a TV programme (1- or 2-digits)

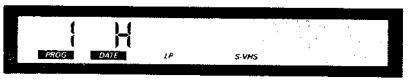
or

1 ... 0

TIMER

The entries for other signal sources (satellite receiver, video-camera/-recorder, hifi unit) can be found on page 43, points 5b, c, d, e.





For example the 1st Programme.

"H" will appear for "today's" (Heute) date.

6. Entering the date

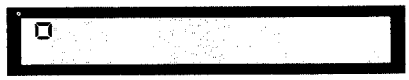
or

a) "Today" confirm

TIMER

Enter another date or select the function "daily" or "weekly", see page 43, points 6b, c, d.

7. Recording Programming Variant 1

Press these buttons on the remote control handset	This will appear in the remote control handset display	Explanation
7. Entering the start time (4-place) 1 ... 0 TIMER	 	The start time is the time the broadcast starts, in our example 20:15 .
8. VPS Signal or a) confirm: TIMER b) clear: CL		If the VPS signal is not required (e.g., if the TV station does not transmit this signal), it must be cleared.
9. Entering the start time (4-place) 1 ... 0 TIMER		The stop time is the time the broadcast ends, in our example 21:45 Uhr. All data has now been stored in the remote control handset.
10. Transmitting the data to the recorder OK		Point the remote control handset at the recorder during the transferral of data until the ▢ symbol goes out in the remote control handset display. After the data has been transmitted, the recorder is ready to record.

If the ▢ symbol appears in the recorder's display, re-transmit the data by pressing the TIMER button and then the OK button.

Using this example you can enter the recording data for other broadcasts.

Further operating instructions and options for these variants can be found on pages 43 and 44.

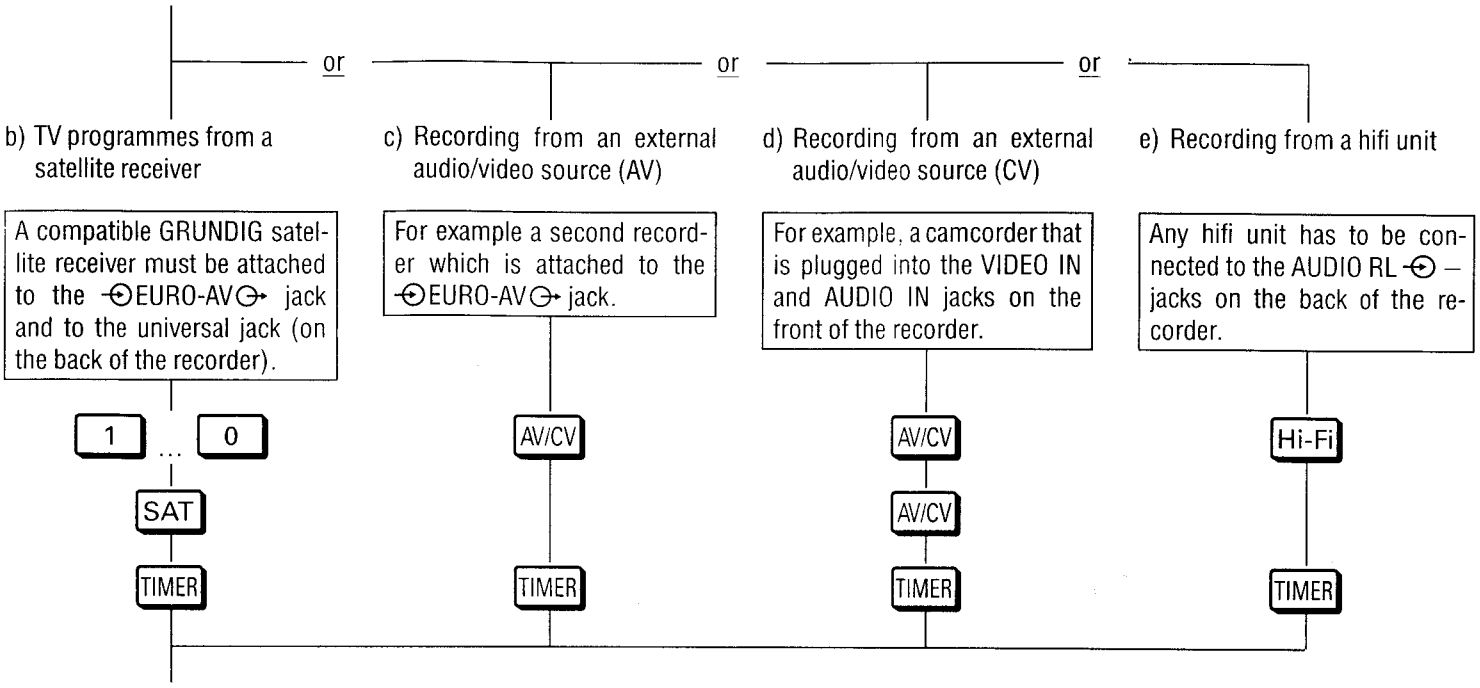
▶▶

7. Recording Programming Variant 1

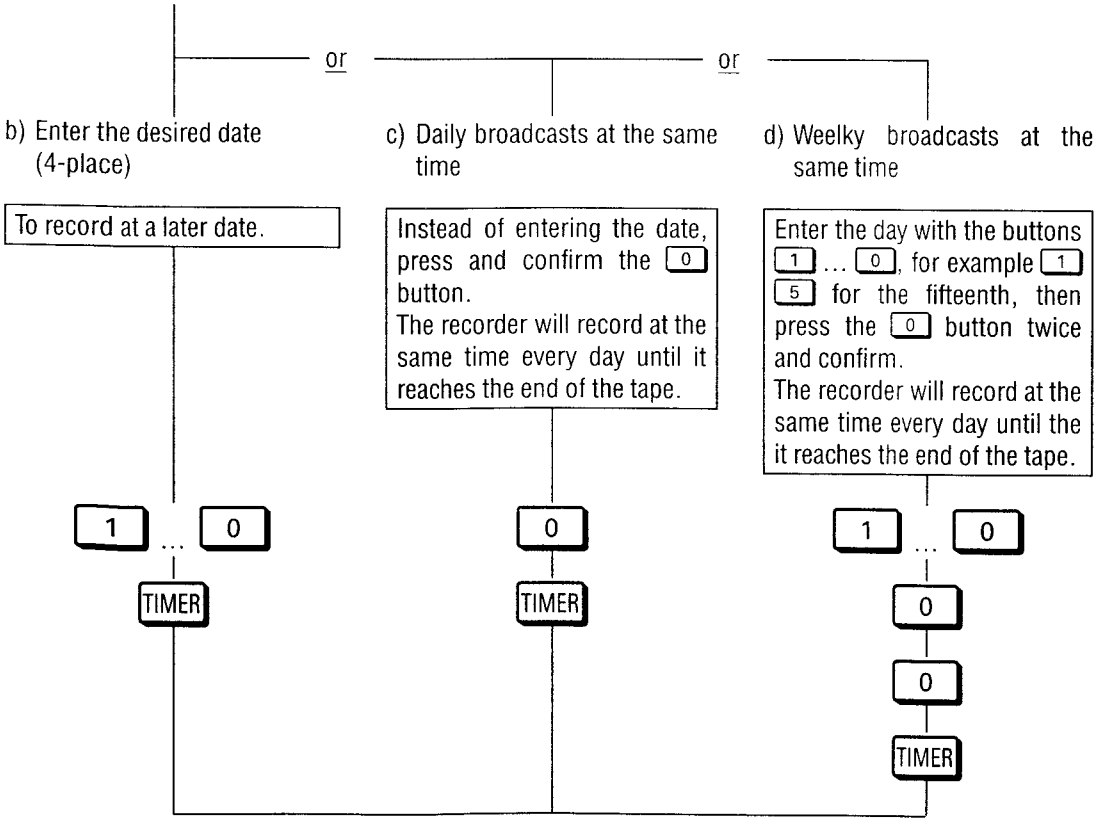
Other functions for variant 1

The options shown below were selected in place of the entries on page 41, points 5 and 6.

5. Entering other signal sources


or
or
or
b) TV programmes from a satellite receiver
c) Recording from an external audio/video source (AV)
d) Recording from an external audio/video source (CV)
e) Recording from a hifi unit
A compatible GRUNDIG satellite receiver must be attached to the ⊖EURO-AV⊖ jack and to the universal jack (on the back of the recorder).
For example a second recorder which is attached to the ⊖EURO-AV⊖ jack.
For example, a camcorder that is plugged into the VIDEO IN and AUDIO IN jacks on the front of the recorder.
Any hifi unit has to be connected to the AUDIO RL ⊖ – jacks on the back of the recorder.
1 ... 0
SAT
AV/CV
AV/CV
AV/CV
Hi-Fi
TIMER
TIMER
TIMER
TIMER

6. Entering another date


or
or
b) Enter the desired date (4-place)
c) Daily broadcasts at the same time
d) Weelky broadcasts at the same time
To record at a later date.
Instead of entering the date, press and confirm the 0 button.
The recorder will record at the same time every day until it reaches the end of the tape.
Enter the day with the buttons 1 ... 0, for example 1 5 for the fifteenth, then press the 0 button twice and confirm.
The recorder will record at the same time every day until the it reaches the end of the tape.
1 ... 0
0
1 ... 0
TIMER
TIMER
0
0
TIMER

After the programming ...

... the recorder accepts the data from the remote control handset.
The recorder is now in the record standby mode and the drive mechanism buttons will be blocked from now on.
The remaining playing of the tape will briefly appear in the display of the recorder, (exception: daily or weekly recordings at the same time).
Then the display will show the programme position, the start time, the day and the station abbreviation for the TIMER position that will be recorded first.

Possible indications on the recorder

If the display of the recorder shows instead of the remaining playing time...

...FULL a cassette with insufficient playing time was loaded.
If the sum of all recording times is greater than the total playing time of the loaded cassette, the recorder will record up to the end of the tape, switch there automatically to fast rewind, rewind the tape to the beginning, and switch to stop.
Or all TIMER positions of the recorder are occupied.

...--:-- the total playing time of the cassette has not been recognized.

...CASS the cassette is erase-protected or no cassette is loaded.

...COLL the TIMER recording times overlap each other.

If CASSN°--- appears instead of the cassette number in the display of the recorder, then you must enter the cassette number if you wish that the recording be stored in the archive.
For this, enter the cassette number as three digits with the numbered buttons [1] ... [0] and confirm with the button [↵].
When recording is started, the recorder stores automatically "DIVERS" (MISC) as subject, and the station abbreviation and the start time as title into the archive.
When recording is finished, you can enter a title of your choice and allocate this title to a category – see the second part of the operating instructions, page 15 "Finding Out About the Cassette Contents".

Switching off the display of the remote control handset

Press the button [⏻].
The display goes out, but the TIMER data can be retrieved by pressing the button [TIMER].
After approx. 1 minute, the display is automatically switched off.

Checking the occupied TIMER positions of the recorder

For this, the display of the remote control handset must be switched off.

Select the respective TIMER position by repeatedly pressing the button [TIMER CHECK], until the display of the recorder shows the desired TIMER position and the corresponding TIMER indication flashes.
As long as the TIMER indication is flashing, you can call up further data items of this TIMER position by pressing the button [OK]:
The date, the cassette number, the remaining playing time (not with "daily" or "weekly" recordings at the same time).

Erasing an occupied TIMER position of the recorder

For this, the display of the remote control handset must be switched off.

Select the respective TIMER position by repeatedly pressing the button [TIMER CHECK], until the data to be erased is shown in the display of the recorder.
Press the button [CL] to clear the data of the TIMER position.

Interrupting the record standby mode

If you have programmed TIMER positions but wish to use the recorder when it is in the record standby mode, then press the button [▲] on the recorder. The cassette will automatically be ejected, or
press the [⏻] button on the remote control handset for a longer time.
The TIMER data in the display of the recorder disappears, the TIMER indication of the TIMER position for the first programmed recording flashes, and the data remains stored in memory.

The record standby mode of the recorder is now interrupted.

Now select the desired function.

Reactivating recording status

Insert a cassette with sufficient playing time, wait until the ATTS measurement is completed, and then press the button [⏻] a longer time.
The cassette number will briefly appear in the display of the recorder.
If the indication CASSN°--- appears instead of the cassette number, then you must enter the cassette number if you wish to store the recording into the archive.
For this, enter the cassette number as three digits with the numbered buttons [1]...[0] and confirm the entry with the button [↵].
The recorder now is in the record standby mode again and the TIMER recordings will be made at the programmed times.

7. Recording Programming

Quick Programming Using the Teletext Pages from TV Stations, Variant 2

Preparation

Turn on the TV set.

Select the AV programme position for the recorder on the television set (serves as a control monitor when entering data).

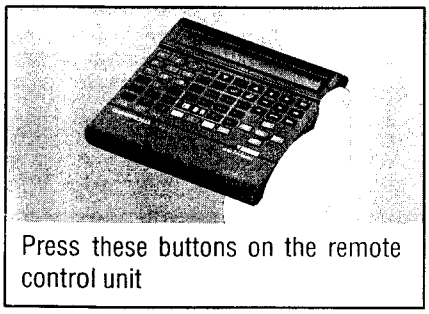
Open the front flap of the recorder.

Insert a cassette with sufficient playing time, making sure it can be recorded on/over.

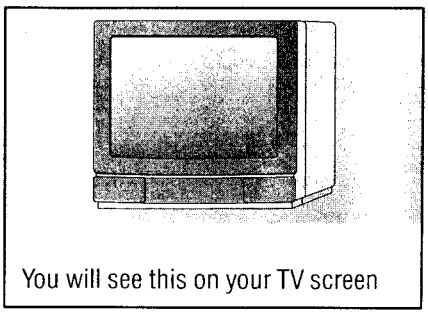
The recorder will determine the length of the tape (display indication ATTS) and the type of cassette.

If CASSN?--- appears in the recorder display, enter the cassette number (three-digit) with the buttons [1] ... [0] and confirm it with the [⏏] button. You only have enter the cassette number if you want to use the archive system.

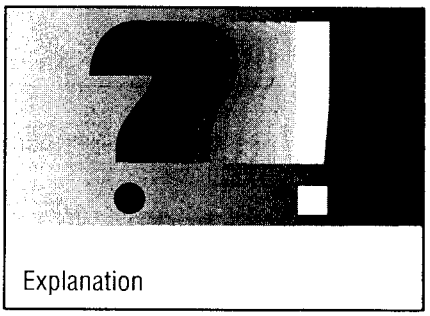
Programming example



Press these buttons on the remote control unit



You will see this on your TV screen



Explanation

1. Selecting a TV programme – (1- or 2-digit)

[1] ... [0]

You can select the programme positions 1 to 9 with one digit,

and the positions 10 to 99 with two digits.

2. Calling up a Teletext page

[VPT]

A cursor (▮) is located next to the starting time of the programme on the Teletext overview.

If the cursor does not appear, press the [OK] button.

The Teletext page is dependent on the entry in the "Station Table" (see page 18 or page 22).

7. Recording Programming Variant 2

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

3. Selecting a broadcast

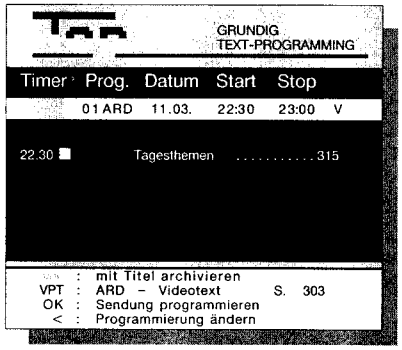
▼ ... ▼

Stop
Textprogramming:
ARD
Montag, 11.März 1991
* = VT-Untertitel.. 150
19.58 Heute im Ersten
20.00 Tagesschau * 310
20.15 Peter Strohm: Amateure sterben schnell * 314
21.04 Tagesthemen-Telegramm
21.05 Juhnke & Co. Comedy-Serie 316
21.30 Robot-Reich 317
22.00 Mary 318
22.30 Tagesthemen 315
23.00 Leben hinter Masken Spielfilm Hongkong 1988 319
00.50 Tagesschau
00.55 Z.E.N. bis 01.00 Uhr
anschließend "Videotext für alle"
Dienstagvormittag auf 321
v : wählt
OK : bestätigt Sendung

Repeatedly press the button ▼, until the cursor (▮) is located at the start time of the desired broadcast.

4. Confirming the broadcast

OK


GRUNDIG
TEXT-PROGRAMMING
Timer Prog. Datum Start Stop
01 ARD 11.03. 22:30 23:00 V
22.30 Tagesthemen 315
: mit Titel archivieren
VPT : ARD - Videotext S. 303
OK : Sendung programmieren
< : Programmierung ändern

The data of the broadcast is adopted by the first memory position (TIMER).

If a "V" appears after the stop time, then the TV station transmits the VPS signal and it will control the recording.

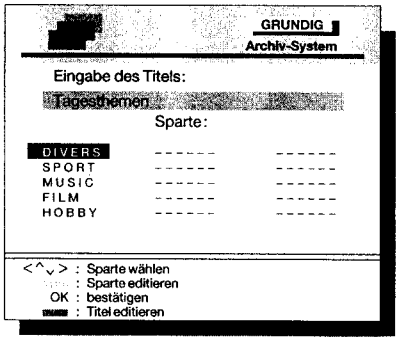
Now check, whether all data items (programme, date, start and stop times, VPS signal) are completely and correctly indicated.

If modifications are necessary, then refer to the chapter "Modifications and completions ..." on page 48.

If no modifications are required, then continue with point 5.
If you do not wish to store titles into the archive, then continue with point 8.

5. Storing titles into the archive

(blue)



The title of the selected broadcast is automatically adopted by the Teletext programme summary.

If you wish to modify the title, then continue with point 6. If no modifications are required, you can allocate the title to a category subject, (refer to point 7.)

▶▶

7. Recording Programming Variant 2

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

6. Changing the title

or

(blue)

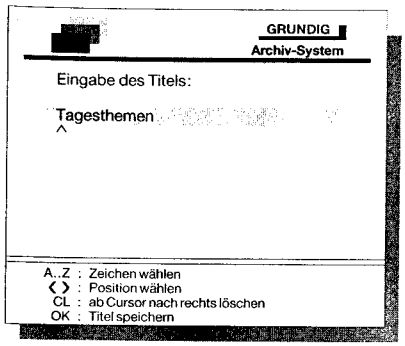
a) Entering letter/character

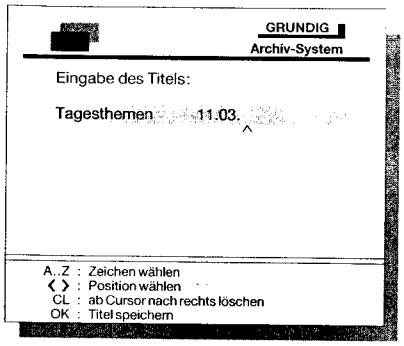
A ... Z

1 ... 0

b) Storing a title

OK





1 to 30 letters/characters can be entered for the title.

If you want to use capital letters, press the SHIFT button.
If you want to use special characters, switch over to the key pad on the remote control handset by pressing the S-TYP button.

The letters/characters which can be used can be found on the enclosed insert.

If you need a space, press the SPACE button.

You can move the cursor to the right or the left with the ◀ button or the ▶ button.

With the CL button you can clear the text to the right of the cursor.

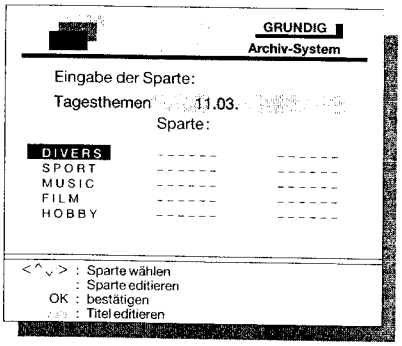
---

7. Categorizing a title

▲

◀ ▶

▼



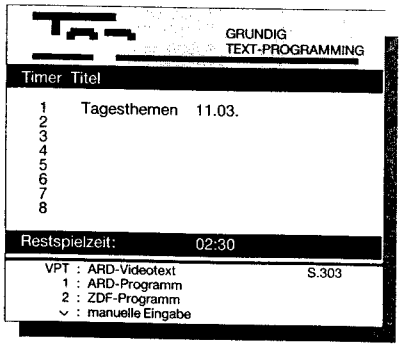
There are a few preset categories.

If you want to create a "new" category, you can name it yourself. You will find further instructions in the second part of the instruction manual in the "Creating New Cateories" chapter on pages 27 to 28.

---

8. Confirming Recording Data

OK



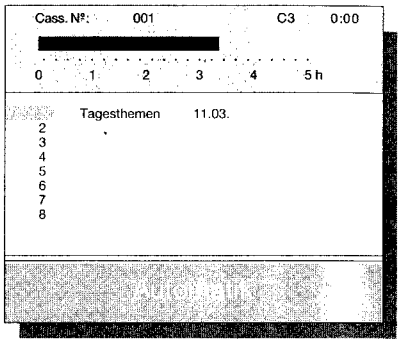
The menu will show all of the timer places, timer 1 is occupied.

"Restspielzeit" (Remaining Playing Time) indicates the amount of time left on the tape.

To programme other broadcasts, select the necessary Teletext pages with programme overview with the buttons 1 to 9 and repeat points 3 to 8.

If you want to programme broadcasts in places 10 to 99, press the ⏻ button and repeat points 1 to 8.

7. Recording Programming Variant 2

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation
9. Terminating record programming INFO INFO		The recorder is in record standby mode. In the display of the recorder, the data of the TIMER position that will be recorded first is shown. All recorder tape run functions will be blocked from now on. The recording will be made at the programmed time. If record programming is not terminated with the button INFO, the recorder cannot start recording.

Modifications and completions of the recording data

(necessary for the point 4 of the programming example)

Correcting the data

Press once the button ◀, then repeatedly press the button ◀ until the cursor is at the first position of the data field to be corrected.
"Overwrite" this data with the numbered buttons 1 to 0 and confirm the remaining data fields with the button OK.

Recording without VPS

Press button ◀ and then button ▼.
The cursor jumps to the first figure of the start time.
If the start time and the VPS time differ, enter the start time again with the numbered buttons 1 ... 0 and confirm the remaining data fields with the button OK.

Doubling the recording time of the cassette

Press the button ◀ and then the button LP.
Additional indication: L.

Recordings with radio sound (parallel dubbing)

Press the button ◀ and then the button Hi-Fi.
Additional indication: P.

Paging backwards to the same Teletext page

Press the button VPT.

Possible messages in the dialogue line

If the "Restspielzeit" (Remaining Playing Time) is negative (–) and highlighted in red, then a cassette with insufficient playing time has been loaded, or the sum of all TIMER recording times is too large.

If the message "Aufnahmedauer" (Record period) and/or "Cass" appears instead of the "Restspielzeit" (Remaining Playing Time) indication, then ...
... no cassette has been loaded;
... the cassette is protected against new recording;
... a non-standard hours cassette has been loaded.

If a red line with the message "Kollision" (Record Timer Overlap) appears (the corresponding TIMER positions are red highlighted), then the recording times of the TIMER positions overlap each other. In this case, change the data of one TIMER position. For this, select the TIMER position with the button ▼, press once the button ▶, then select the data to be modified with the button ▶ or ◀, enter the new data, and confirm the data line step by step with the button OK.

The message "Aufnahmebeginn in Kürze" (recording starts soon) will appear ten minutes before the recording starts, if you are still in the "record programming" mode.

If the message "Aufnahmebeginn erreicht" (recording start time reached) appears, you should immediately exit the record programming mode so that the recorder can start recording. To do this press the INFO button twice.

▶▶

7. Recording Programming Variant 2

Modifying individual data items of a TIMER position

Select the "Info" page with the button [INFO].

Call up the "Aufnahmeprogrammierung" (Record Programming) page with the numbered button [1].

Select "Manuelle Eingabe" (Manual Input) with button [▼].

Select the respective TIMER position with the button [▼] or [▲], then press the button [▶].
Select the data item to be modifed with the button [▶] or [◀], enter the new data with the numbered buttons [1]...[0], and confirm the data line step by step with the button [OK].

Erasing occupied TIMER positions

Select the "Info" page with the button [INFO].

Call up the "Aufnahmeprogrammierung" (Record Programming) page with the numbered button [1].

Select "Manuelle Eingabe" (Manual Input) with button [▼].

Select the TIMER position to be erased with the button [▼] or [▲], and erase it by pressing the button [CL].
The TIMER position is cleared and can be programmed anew.

Terminating record programming

For this, press twice the button [INFO].
After a short time, you will see the data of the TIMER position for the first recording.
All tape run functions of the recorder are from now on "blocked".
At the programmed time, the recorder will automatically start recording.

If the "Record Programming" mode is not terminated with the button [INFO], the recorder cannot start the recording.

In the record standby mode and during recording, you can call up a summary of the programmed titles by pressing the button [TIMER CHECK].

On the picture screen of the TV set appears a page showing the cassette number, the playing time, and all programmed titles.
The recording which will be made next is marked blue.
From the record start time on, the programmed recording time is marked by a yellow line.
When this marking line appears in red and ends within the playing time indication, then a recording stored in the archive is partially erased.
When this marking line appears in red and surpasses the playing time indication, then the sum of all programmed recording times is too large.

Interrupting the record standby mode

If you wish to use the recorder (e.g., for playback) when it is in the record standby mode, then

press the button [▲] on the recorder. The cassette will automatically be ejected,
or

press a longer time the button [⏻] on the remote control handset.
The TIMER data in the display of the recorder disappears, the TIMER indication of the TIMER position for the first programmed recording flashes.

The record standby mode of the recorder is now interrupted.

Now select the desired function.

Reactivating recording status

Insert a cassette with sufficient playing time, wait until the ATTS measurement is completed, and then press the button [⏻] a longer time.
The cassette number will briefly appear in the display of the recorder.
If the indication CASSN?---- appears instead of the cassette number, then you must enter the cassette number if you wish to store the recording into the archive.
For this, enter the cassette number as three digits with the numbered buttons [1]...[0] and confirm the entry with the button [↵].
The recorder now is in the record standby mode again and the TIMER recordings will be made at the programmed times.

7. Recording Programming

Programming with the Remote Control Handset Using the On-Screen Dialogue and Manual Data Entry, Variant 3

Preparation

Turn on the TV set.

Select the AV programme position for the recorder on the television set (serves as a control monitor).

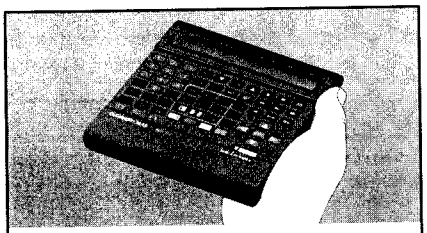
Open the front flap of the recorder.

Insert a cassette with sufficient playing time, making sure it can be recorded on/over.

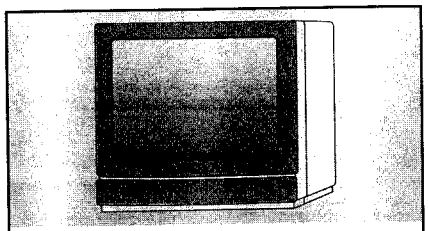
The recorder will determine the tape length (display indicator ATTS) and the type of cassette.

If CASSN?---- appears in the recorder display, enter the cassette number (three digit) with the buttons [1] ... [0] and confirm it with the [⏎] button. You only have to enter the cassette number if you want to use the archive system.

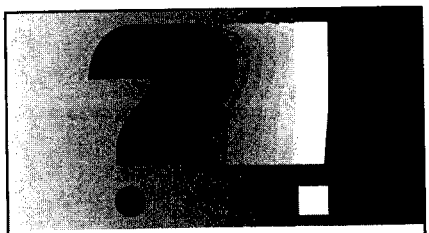
Programming example



Press these buttons on the remote control unit



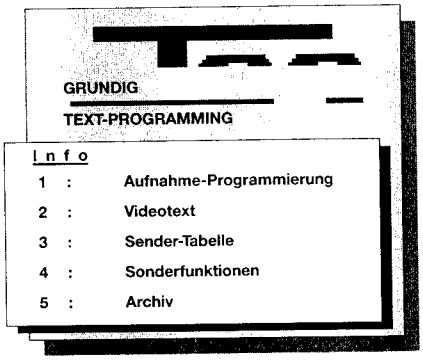
You will see this on your TV screen



Explanation

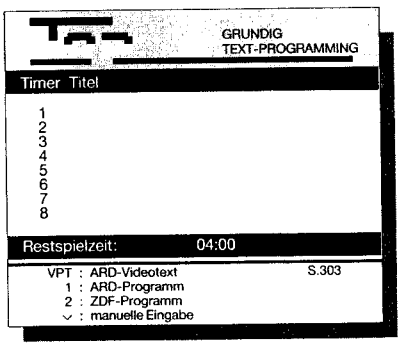
1. Calling up the Info menu

INFO



2. Activating recording programming

1

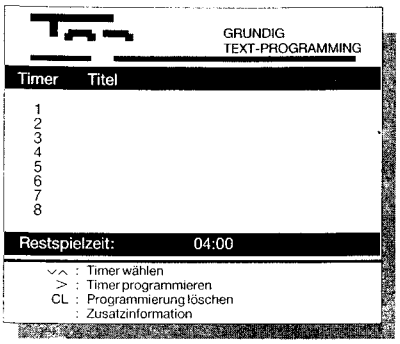


7. Recording Programming Variant 3

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

3. Selecting manual entry

▼

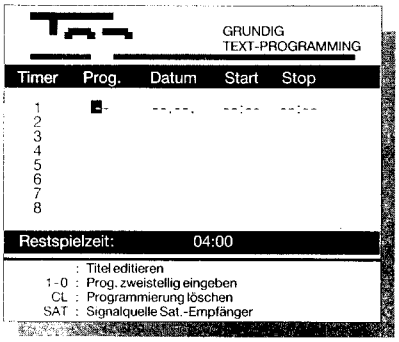


The TIMER place 1 is marked by a blue cursor (▮)

If the first TIMER place is occupied, you can select the next one with the buttons ▼ or ▲.

4. Activating the TIMER place

▶



Horizontal lines will appear in the selected TIMER place and a black cursor will appear on the first place of the Prog. (programme) (▮).

The recorder will not accept incorrect entries (e.g., 32.05. = incorrect date). The cursor will skip to the first place of the data to be entered. Repeat the entry.

If corrections have to be made for any of the entries for points 7 to 11, you can move the cursor to the desired position with the ◀ button or the ▶ button and enter the new data.

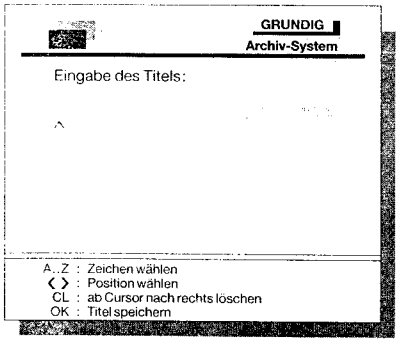
5. Entering the title of the broadcast

(blue)

a) Selecting a letter/character

A ... Z

1 ... 0



If you do not want to archive the title continue on with the instructions from point 7.

1 to 30 letters/characters can be entered for the title.

If you want to use capital letters, press the SHIFT button.
If you want to use special characters, switch over to the remote control handset keypad with the S-TYP button.

The letters/characters which can be used are found on the enclosed insert.

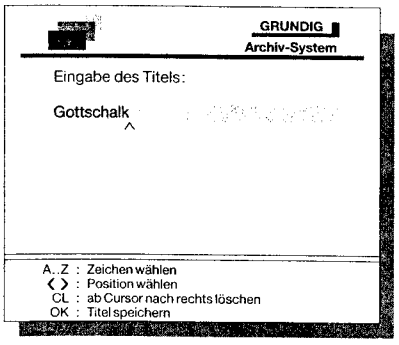
If you need a space, press the SPACE button.

You can move the cursor to the right or left with the ◀ button or the ▶ button.

You can clear the text to the right of the cursor with this CL button.

b) Storing a title

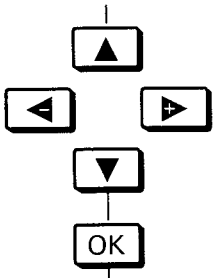
OK

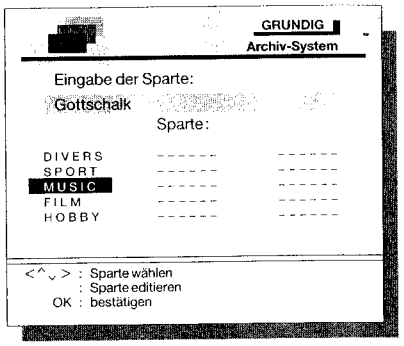


7. Recording Programming Variant 3

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

6. Categorizing a title





Several categories have been preset.

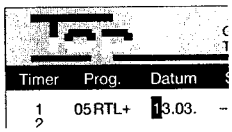
If you need to create a "new" category, you can name it yourself. To do this read the second part of the instruction manual, the "Creating New Categories" chapter on pages 27 to 28.

7. Selecting a programme

or or or

a) Television programme

1 ... 0

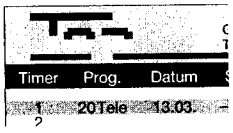


b) TV programme from a satellite receiver

A compatible satellite receiver must be connected to the ⊖EURO-AV⊖ jack and to the universal jack (on the back of the recorder).

SAT

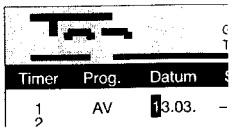
1 ... 0



c) Recording from an external audio/visual source (AV)

For example, a second recorder that is attached to the ⊖EURO-AV⊖ jack.

AV/CV

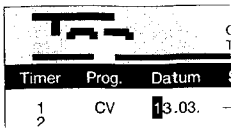


d) Recording from an exte audio/visual source (CV)

For example a camcorder t is attached to the VIDEO and AUDIO IN jacks on front of the recorder.

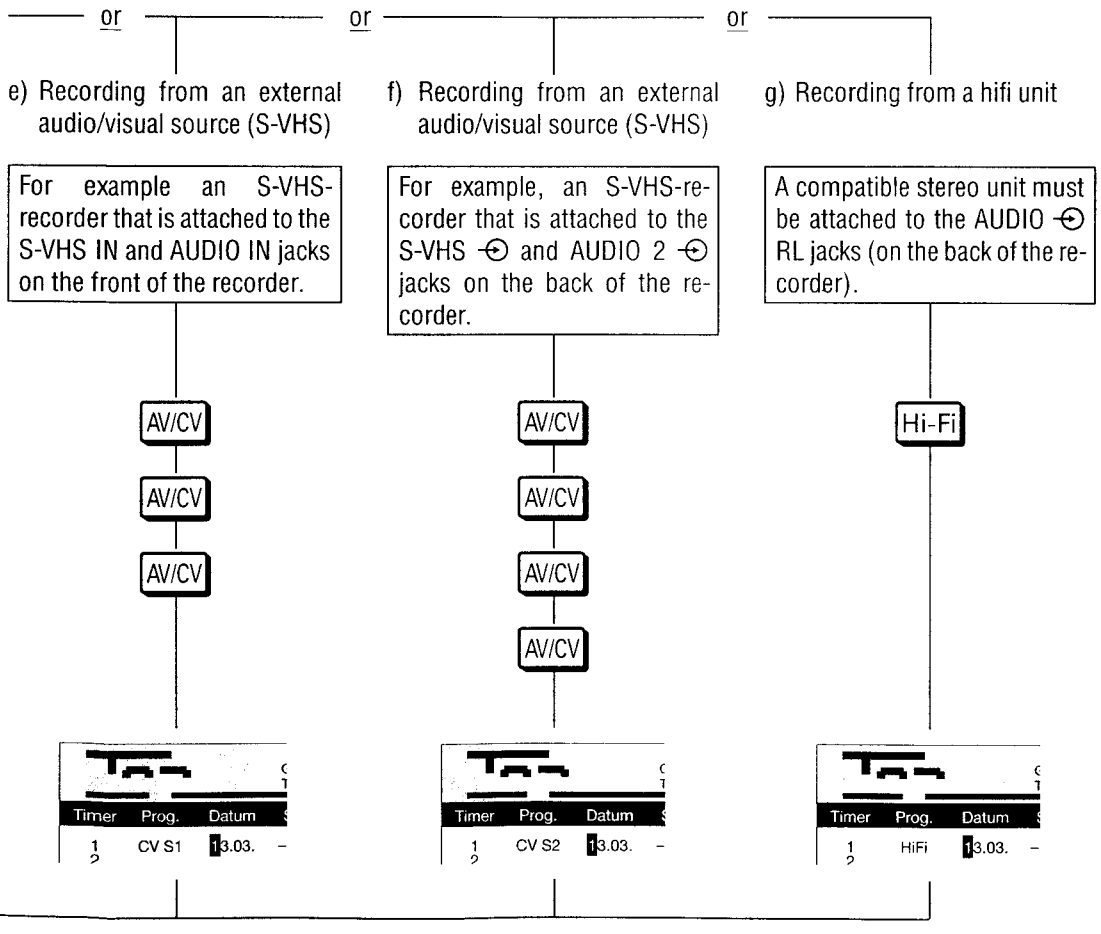
AV/CV

AV/CV



The data line for satellite programmes is underlined in blue. "SAT" will appear in the Info line.

7. Recording Programming Variant 3


or
or
or
e) Recording from an external audio/visual source (S-VHS)
f) Recording from an external audio/visual source (S-VHS)
g) Recording from a hifi unit
For example an S-VHS-recorder that is attached to the S-VHS IN and AUDIO IN jacks on the front of the recorder.
For example, an S-VHS-recorder that is attached to the S-VHS ⊖ and AUDIO 2 ⊖ jacks on the back of the recorder.
A compatible stereo unit must be attached to the AUDIO ⊖ RL jacks (on the back of the recorder).
AV/CV
AV/CV
AV/CV
AV/CV
AV/CV
AV/CV
Hi-Fi
Timer Prog. Datum
1 CV S1 13.03. –
2
Timer Prog. Datum
1 CV S2 13.03. –
2
Timer Prog. Datum
1 HiFi 13.03. –
2

7. Recording Programming Variant 3

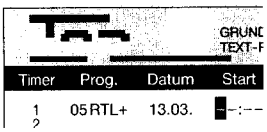
Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

8. Confirming or entering date

or

a) For recordings on the same day confirm today's date

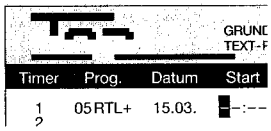
OK



or

b) For recordings on another day enter the desired date (4-place)

1 ... 0



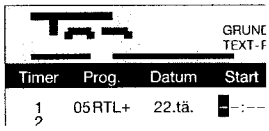
or

c) For daily recordings at the same time select the every day function

Enter the day.

1 ... 0

(green)



Display indication: day and "tä" (= daily).
The broadcast will be recorded daily starting with the selected day.
This will continue until the tape runs out.

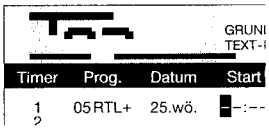
or

d) For weekly recordings at the same time select the every week function

Enter the day.

1 ... 0

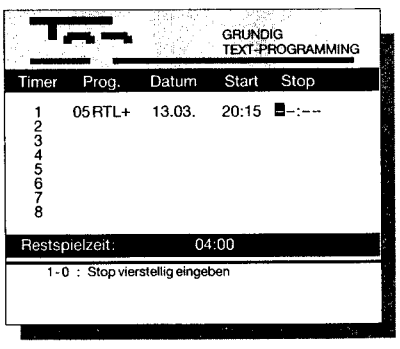
(yellow)



Display indication: day and "
(weekly).
The broadcast will be recor
weekly starting with the sele
day until the tape runs out.

9. Entering the starting time (4-place)

1 ... 0



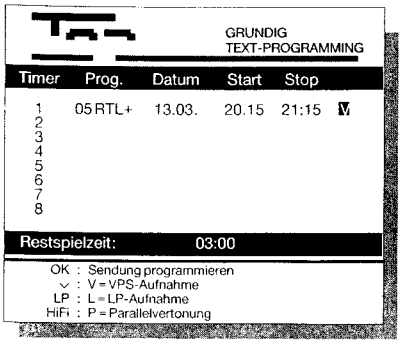
Starting time = when the broadcast starts, in our example 20:15 .

7. Recording Programming Variant 3

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

10. Entering the stop time (4-place)

1 ... 0



Stop time (= end of the broadcast), in our example 21 : 15 .

11. Other Functions

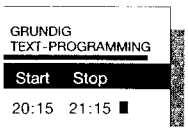
You can select these additional functions. If they are not needed, continue on with the instructions from point 12.

and/or — and/or

a) Clear VPS

if broadcasts without VPS control are to be programmed.

▼

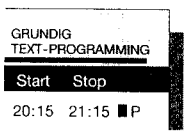


No function for hifi programming.

b) Select parallel dubbing

If radio sound is to going to be added to the TV picture.

Hi-Fi

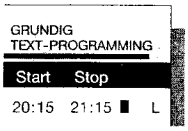


No function for hifi or AV programming.

c) Select longplay mode

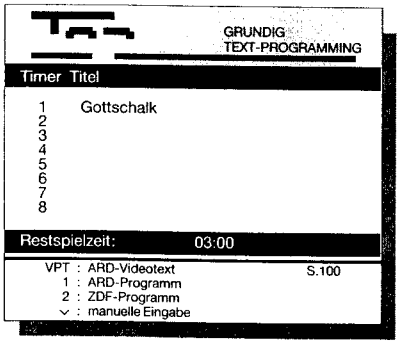
if you wish to double the recording time of the cassette.

LP



12. Confirming recording data

OK



The menu shows all the TIMER places, Timer 1 is occupied.

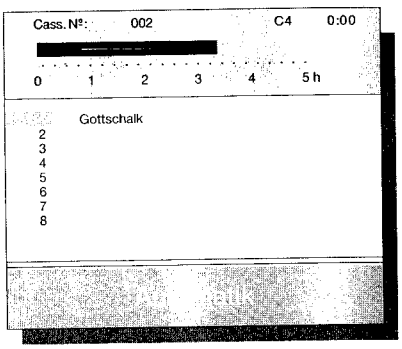
"Restspielzeit" (Remaining Playing Time) indicates the remaining playing time on the tape.
Exception: not for "daily" and "weekly" recordings at the same time.

You can programme the other TIMER places following this example.

If changes are necessary, read the chapter on page 57,
if they are not necessary terminate the recording programming following point 13.

▶▶

7. Recording Programming Variant 3

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation
13. Terminating record programming INFO INFO		The recorder is in record standby mode. In the display of the recorder, the data of the TIMER position that will be recorded first is shown. All recorder tape run functions will be blocked from now on. The recording will be made at the programmed time. If record programming is not terminated with the button INFO, the recorder cannot start recording.

Possible message in the dialogue line

If the "Restspielzeit" (Remaining Playing Time) is negative (–) and highlighted on red background, then a cassette with insufficient playing time has been loaded, or the sum of all TIMER recording times is too large.

If the message "Aufnahmedauer" (Record period) and/or "Cass" appears instead of the "Restspielzeit" (Remaining Playing Time) display indication, then...

... no cassette has been loaded;
... the cassette is protected against new recording;
... a non-standard hours cassette is loaded.

If a red line with message "Kollision" (Record Timer Overlap) appears (the corresponding TIMER positions are red highlighted), then the recording time of the TIMER positions overlap each other.
In this case, change the data of one TIMER position. To do this, select the TIMER position with the ▼ button, press the ▶ button once, then select the data te be modified with the ▶ or ◀ button, enter the new data, and confirm the data line step by step with the OK button.

The message "Aufnahmebeginn in Kürze" (recording starts soon) will appear ten minutes before the recording starts, if you are still in the "Record Programming" mode.

If the message "Aufnahmebeginn erreicht" (recording start time reached), you should immediately exit the record programming mode so that the recorder can start recording.
To do this press the INFO button twice.

7. Recording Programming Variant 3

Modifying individual data items of a TIMER position

Select the "Info" page with the button [INFO].

Call up the "Aufnahmeprogrammierung" (Record Programming) page with the numbered button [1].

Select "Manuelle Eingabe" (Manual Input) with button [▼].

Select the respective TIMER position with the button [▼] or [▲], then press the button [►].
Select the data item to be modifed with the button [►] or [◄], enter the new data with the numbered buttons [1]...[0], and confirm the data line step by step with the button [OK].

Erasing occupied TIMER positions

Select the "Info" page with the button [INFO].

Call up the "Aufnahmeprogrammierung" (Record Programming) page with the numbered button [1].

Select "Manuelle Eingabe" (Manual Input) with button [▼].

Select the TIMER position to be erased with the button [▼] or [▲], and erase it by pressing the button [CL].
The TIMER position is cleared and can be programmed anew.

Terminating record programming

To do this, press the [INFO] button twice.
After a short time, you will see the data of the TIMER position for the first recording.
All tape run functions of the recorder are from now on "blocked".
At the programmed time, the recorder will automatically start recording.

> If the "Aufnahmeprogrammierung" (Record Programming) mode is not terminated with the button [INFO], the recorder cannot start the recording.

In the record standby mode and during recording, you can call up a summary of the programmed titles by pressing the button [TIMER CHECK].

On the picture screen of the TV set appears a page showing the cassette number, the playing time, and all programmed titles.
The recording which will be made next is marked blue.
From the record start time on, the programmed recording time is marked by a yellow line.
When this marking line appears in red and ends within the playing time indication, then a recording stored in the archive is partially erased.
When this marking line appears in red and extends past the playing time indication, then the sum of all programmed recording times is too large.

Interrupting the record standby mode

If you wish to use the recorder (e.g., for playback) when it is in the record standby mode, then

press the button [▲] on the recorder. The cassette will automatically be ejected,
or

press a longer time the button [⏻] on the remote control handset.
The TIMER data in the display of the recorder disappears, and the TIMER indication of the TIMER position for the first programmed recording flashes.

> The record standby mode of the recorder is now interrupted.

Now select the desired function.

Reactivating recording status

Insert a cassette with sufficient playing time, wait until the ATTS measurement is completed, and then press the button [⏻] a longer time.
The cassette number will briefly appear in the display of the recorder.
If the indication CASSN?--- appears instead of the cassette number, then you must enter the cassette number if you wish to store the recording into the archive.
For this, enter the cassette number as three digits with the numbered buttons [1]...[0] and confirm the entry with the button [↵].
The recorder now is in the record standby mode again and the TIMER recordings will be made at the programmed times.

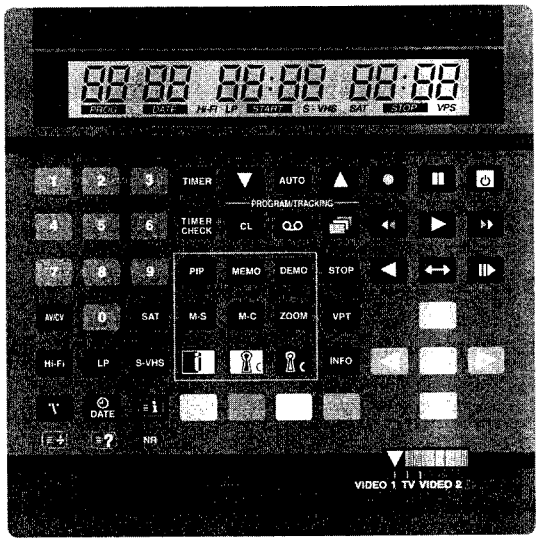
8. Valuable Information

The Remote Control Handset at a Glance

Short descriptions of the buttons on the remote control handset can be found on this page and the next few pages. To operate these buttons consult the corresponding chapter in these operating instructions.

Level 1

This level is used for all recording and playback functions, text programming, picture-in-a-picture functions and for the Teletext mode.



[1] ... [0] _ Number buttons for different entries.

[AV/CV] _____ Selects the AV and CV programme positions for recording or recording programming;

[Hi-Fi] _____ Selects the sound signal on the AUDIO jacks for recording or recording programming.

[SAT] _____ Selects a satellite receiver's picture/sound signal on the ⊕ EURO-AV ⊖ jack for recording or recording programming.

[LP] _____ Switches between longplay mode and normal play.

[S-VHS] _____ Switches between S–VHS mode and standard VHS mode.

[ ] _____ For selecting the sound track when recording and playing back;
Enlarges the character size in Teletext mode.

[DATE] _____ Confirms time and date;
Calls up time and date;
Shows concealed information in the Teletext mode, for example for chess games or puzzles.

[ ] NR _____ Selects page 100 (overview) im Teletext mode.
Turns the coloured noise suppressor off and on.

[TIMER] _____ Accesses the TIMER programming in the remote control handset's display and confirms entries.

[▼] PROGRAM __ For selecting programme positions (in stop mode);
For setting the tracking (during playback).

[AUTO] _____ Activates the auto tracking

[▲] PROGRAM __ For selecting programme positions (in stop mode);
For setting the tracking (during playback).

[TIMER CHECK] _____ Calls up the TIMER positions (for checking and for erasing data).

[CL] _____ Erases data; switches picture memory off.

[ ] _____ Switches between the playing time and tape length displays.

[ ] _____ Confirms the entry of the cassette numbers; calls up the contents of the inserted cassette.

[PIP] _____ Fades the micro-picture into the macro-picture.

[MEMO] _____ Stores a single image.

[DEMO] _____ Retrieves the stored image, it will appear on the screen.

[STOP] _____ Digital freeze-frame in playback mode and in the "loop through" mode;
stops multi-pages in the Teletext mode.

[M-S] _____ Selects the "multi-scene" function.

[M-C] _____ Selects the "multi-channel" function.

[ZOOM] _____ Selects the "zoom" function.

▶▶

VPT _____ For recording programming with text programming;
fades the pages stored in "Sender-Tabelle" (Station Table) onto the screen.

_____ Selects the "invers" function

_____ Selects the "superimpose" function

_____ Selects the "superimpose" function

INFO _____ Switches between the Info menu and the television picture.

(red) ____ Turns back on Teletext page;
flips through the archive;
colour selecting button.

(green) ___ Turns to the next Teletext page;
flips through the archive;
for entering new categories (in the archive system);
colour selection button.

(yellow) ___ For interrupting in Teletext mode;
preselection to modify titles (archive system);
colour selection button.

(blue) ___ For selecting topics in the Teletext mode;
releases additional information when using the archive system;
stores and confirms entries into the archive system;
colour selection button.

_____ Starts recording.

_____ Pauses recording,
Freeze-frame in playback.

_____ Ends all functions (stop/standby), turns off the remote control handset's display.

_____ Reverse picture search during playback.
Rewind when in stop mode.

_____ Starts playback.

_____ Forward picture search.
Fast forward when in stop mode.

_____ Starts reverse play.

_____ Starts the directed search after tape position has been entered;

_____ Switches to slow motion.

▲ ◀ ▶ ▼ ___ Cursor buttons, for moving the cursor and for selecting different functions.
For finetuning programmes.

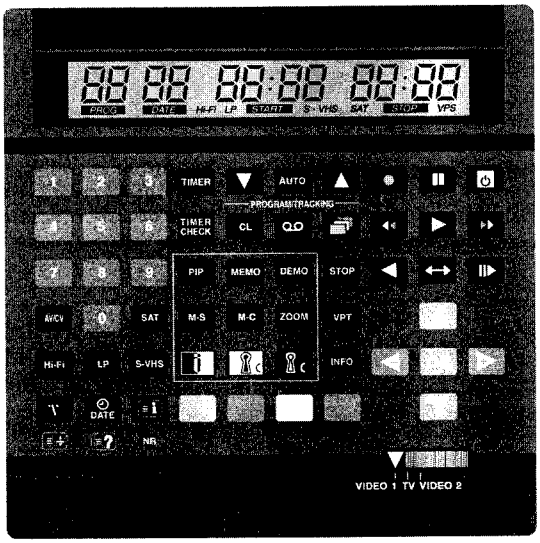
OK _____ Confirms data;
transmits all TIMER data to the recorder.

VIDEO 1 TV VIDEO 2 _ Switches the remote control handset over to control the television set or a second VCR.

Level 2

(When the remote control handset is open, level 1 is turned off.)

This level is used for composing title pages and text/graphics boxes, for selecting screen colours and for recording and playback functions.



[1] ... [0] (. +) — Number buttons for different entries; you can enter the punctuation marks that are located below the buttons by first pressing the [SHIFT] button.

[AV/CV] — Selects the programme positions AV, CV, CV S 1 oder CV S 2 for recording or recording programming.

[E+] — Increases the character size in Teletext mode.

[E1] — Selects page 100 (overview) in Teletext mode.

[BACK GROUND] — Colours a line or the page in preselected colour.

[CON GRAPH] — Ends the "SEPAR GRAPH" function.

[SEPAR GRAPH] — Reduces the graphics symbols to point graphics.

[TIP] — Reads in already stored title pages and text/graphics Boxes from the memory to the editing page or the recording.

[BOX] — Opens the "composing text/graphics boxes" function.

[RELEASE GRAPH] — Stores the "HOLD GRAPH" function.

[HOLD GRAPH] — Repeats the graphics character last entered.

[FLASH] — FLASH function: Texts/characters flash

[STEADY] — Ends the FLASH function.

[HEIGHT] — Doubles the text, character, or line size.

[VPT] — For recording programming with text programming; fades the Teletext pages stored in the station table into the TV screen.

(white, black, lt. blue, magenta, red, green, yellow, blue) — Colour selection buttons for the text colour, for the line colour and for the page background (in the "composing title pages and text/graphics boxes" function);

[INFO] — Switches between the Info menu and the television picture.

[⊟] — Confirms cassette number entry; calls up the contents of the inserted cassette.

[●] [II] [⏻] [↔] [◀◀] [▶] [▶▶] — Operating functions buttons (see level 1).

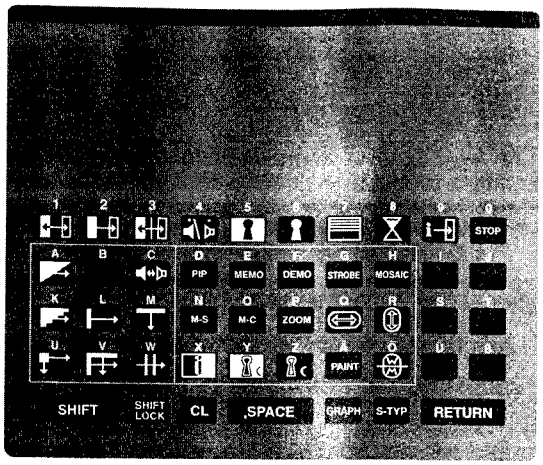
[▲] [◀] [▶] [▼] — Cursor buttons, for moving the cursor and for selecting different functions. For fine tuning programmes.

[OK] — Confirms data; transmits all TIMER data to the recorder.

Level 3

(When the remote control handset is open, level 1 is turned off.)

This level is used for fade and digital functions, to compose title pages and text/graphics boxes and for "Station Table" entries.



Description of the symbols on the buttons

- Starts the fade functions.
- Starts the "last screen" fade function.
- Halts the screen during fade-in or -out.
- Turns the sound off during fade-out.
- Activates the genlockimposing function.
- Activates the genlockimposing function.
- Activates the frame converter.
- Confirms the fade time.
- Switches to the "MIX SOURCE" menu.
- STOP — Digital freeze-frame in playback mode and in the "loop through" mode; Halts multi-pages in the Teletext mode.

- For selecting the different blending screens.
- Preselection of the sound fade-out for the fade functions.
- PIP — Fades a micro-image into a macro-image.
- MEMO — Stores a single image.
- DEMO — Retrieves the stored image – it will appear on the screen.
- STROBE — Selects the strobe effect.
- MOSAIC — Selects the mosaic effect.
- M-S — Selects the "multi-scene" function.
- M-C — Selects the "multi-channel" function.
- ZOOM — Selects the "zoom" function.
- Distorts the picture.
- Selects the "inverse" function.
- Selects the "superimpose" function.
- PAINT — Selects the "paint" effect.
- Selects the "mirror" effect.
- SHIFT — Capitalizes the next letter.
- SHIFT LOCK — Capitalizes all following letters.
- CL — Erases letters, numbers and characters.
- SPACE — Creates a blank space.
- GRAPH — Switches from the keypad to the graphics entry.
- S-TYP — Switches only the next entry over the special characters.
- RETURN — Moves the cursor to the next line.

Description of the symbols above the buttons

- 1 - 0 / A - ß — Numbers and letters located above the buttons for archive system, title page, text/graphics boxes and "Station Table" entries.

8. Valuable Information Fixing Faults Yourself

Not every picture and fault must have its origin in a defect of your recorder.

For example, the cause of the fault might also be an accidentally pulled out connecting cable, a failure of the transmitter, or a failure in your TV aerial system.

Fault	Cause	Remedy
No clock time indication on the recorder/ the cassette is not pulled in.	Pulled out mains plug or bad contact.	Insert mains plug or use another wall socket.
The recorder cannot be operated; mains voltage supply is O.K.	The electronic combination lock is activated (indication LOCKED)	Deactivate the lock.
Recording of TV programmes not possible (only snow on the picture screen).	Aerial cable not connected.	Connect aerial cable.
	Programme to be recorded not tuned to on the recorder.	Tune to programme.
	Failure of TV transmitter or of your aerial system.	Check by selecting the programme to be recorded on the TV set or ask your neighbour whether he can receive this programme.
Recording not possible	Cassette protected against new recording.	Cover the hole in the cassette with sticky tape.
A programmed Timer recording has not been executed.	Timer badly programmed.	
	Wrong entry of VPS time on VPS controlled recordings.	
	Table "Record Programming" still activated.	
	Failure to press a longer time the button ⏻ after having interrupted the record standby mode (Timer position flashes).	
Bad quality of the reproduced picture.	TV set not correctly tuned to the transmitting channel of the recorder.	Tune the TV set correctly to the transmitting channel of the recorder.
	The video heads are soiled.	Let the video heads be cleaned by a specialist.
	The video heads are worn.	Let the head drum be replaced by a specialist.
Operation with the remote control handset not possible.	The batteries of the remote control handset are exhausted.	Fit new batteries.
	The remote control handset is not pointed at the recorder.	Point the remote control handset at the recorder.
	Wrong function level adjusted on the remote control handset.	Switch the function level of the remote control handset to VIDEO 1.

Fault	Cause	Remedy
Despite programming with archiving, the recording is not accepted by the archive.	No cassette number has been entered.	Enter the cassette number.
	The recorder does not know the total playing time of the cassette.	Enter the total playing time of the cassette.
Despite correct entries, the title is not accepted by the archive.	The memory of the archive is full.	expand the memory (consult your dealer).
The name of a subject cannot be changed.	There is already at least one title allocated to the subject.	

When Repair of the Recorder is Necessary

If the above suggestions for clearing the faults stated in the table bring no result, or if the video recorder shows a different fault, then take it to an authorized GRUNDIG dealer.
To ensure that the entries you made into the archive system remain conserved in such a case, please enter your name and address instead of record titles into the last archive positions (see the second part of the Operating Instructions, 1. Archive System, "Manual Post-archiving" chapter, page 11, point 3 to page 14, point 12).

8. Valuable Information

Technical Data

This video recorder complies with the VDE 0860 safety regulations and consequently also with the international safety specifications IEC 65 and CEE 1.

Under no circumstances should you open the video recorder yourself.

The manufacturer accepts no responsibility for damage which occurs under such cirumstances.

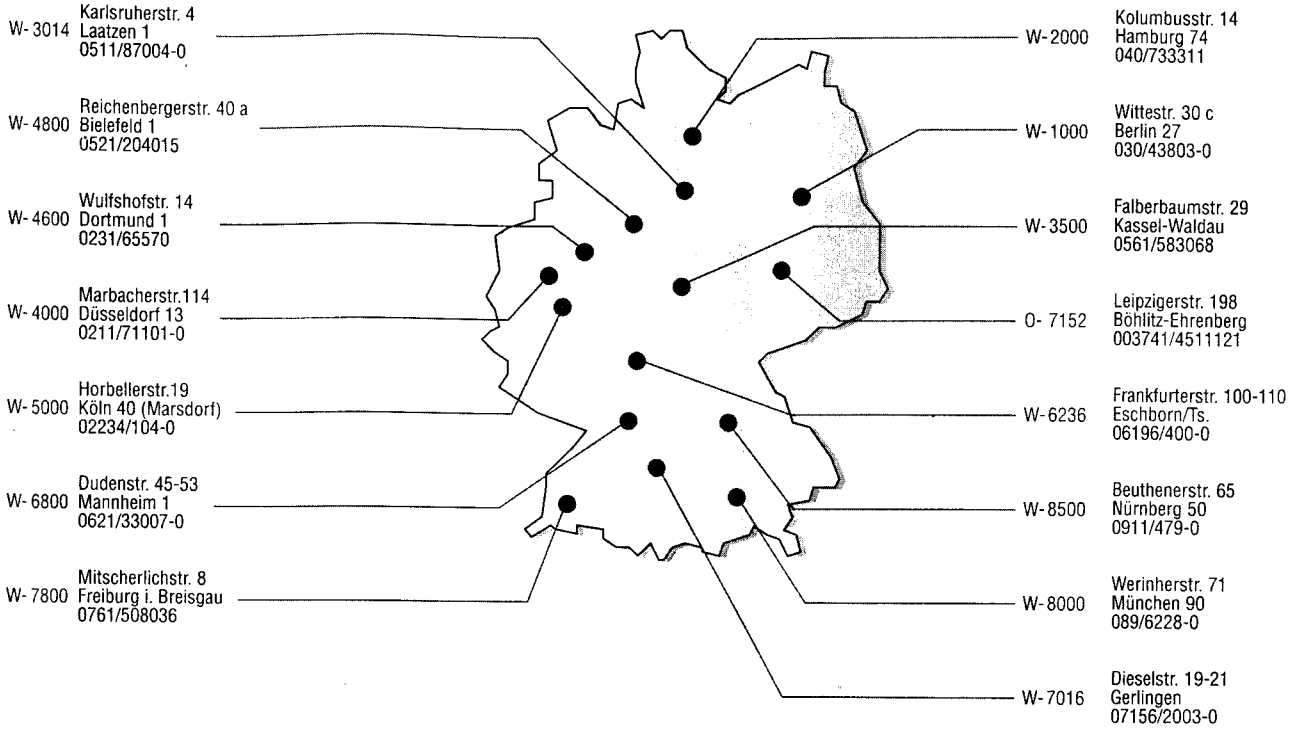
TV norm:	CCIR, PAL B/G/H, 625 lines CCIR, SECAM B/G, 625 lines *
System:	S-VHS and VHS
Mains voltage:	180 ... 240 V~, ± 10 %, 50 Hz
Weight:	approx. 5.7 kg
Power consumption	
– on recording:	approx. 29 W
– in EE mode:	25 W
– modulator off:	13 W
Operation position:	horizontal
Ambient temperature:	+ 5 °C to + 40 °C
Relative humidity:	up to 80 %
Fast wind time forward/reverse:	max. 5 minutes with E 180 cassette
Audio tapewidth:	a) 20 Hz - 20 kHz to DIN 45 500 with hifi sound recordings. b) 40 Hz - 10 kHz to DIN 45 511 with mono sound recordings.
Dynamic range:	approx. 90 dB (with hifi sound)
Wow and flutter:	≦ 0.015 % (typ. DIN, with hifi sound) ≦ 0.005 % (typ. WRMS, with hifi sound)
Distortion factor:	< 0.3 % (with hifi sound)
S-VHS sockets:	
⊖ and ⊖	4-pole
Audio sockets:	
R-⊖L	2 Cinch
R⊖-L	2 Cinch
Universal socket: (non-standard)	9-pole
Euro-AV socket: (DIN/EN 50 049)	21-pole
Aerial input socket: (DIN 45 325)	coaxial **B**, input 75 Ω
Aerial output socket: (DIN 45 325)	coaxial **S**, output 75 Ω
Headphone socket:	3.5 mm ø Jack
Headphone impedance:	8 Ω - 2 kΩ
Microphone socket:	3.5 mm ø
Microphone level:	≥ 2 mV
RC socket:	3.5 mm ø
Video socket: VIDEO IN	Cinch
Audio sockets: Audio IN	Cinch

The complete accessories programme available for your video recorder is shown in the GRUNDIG catalogue which you can obtain from your specialized dealer.

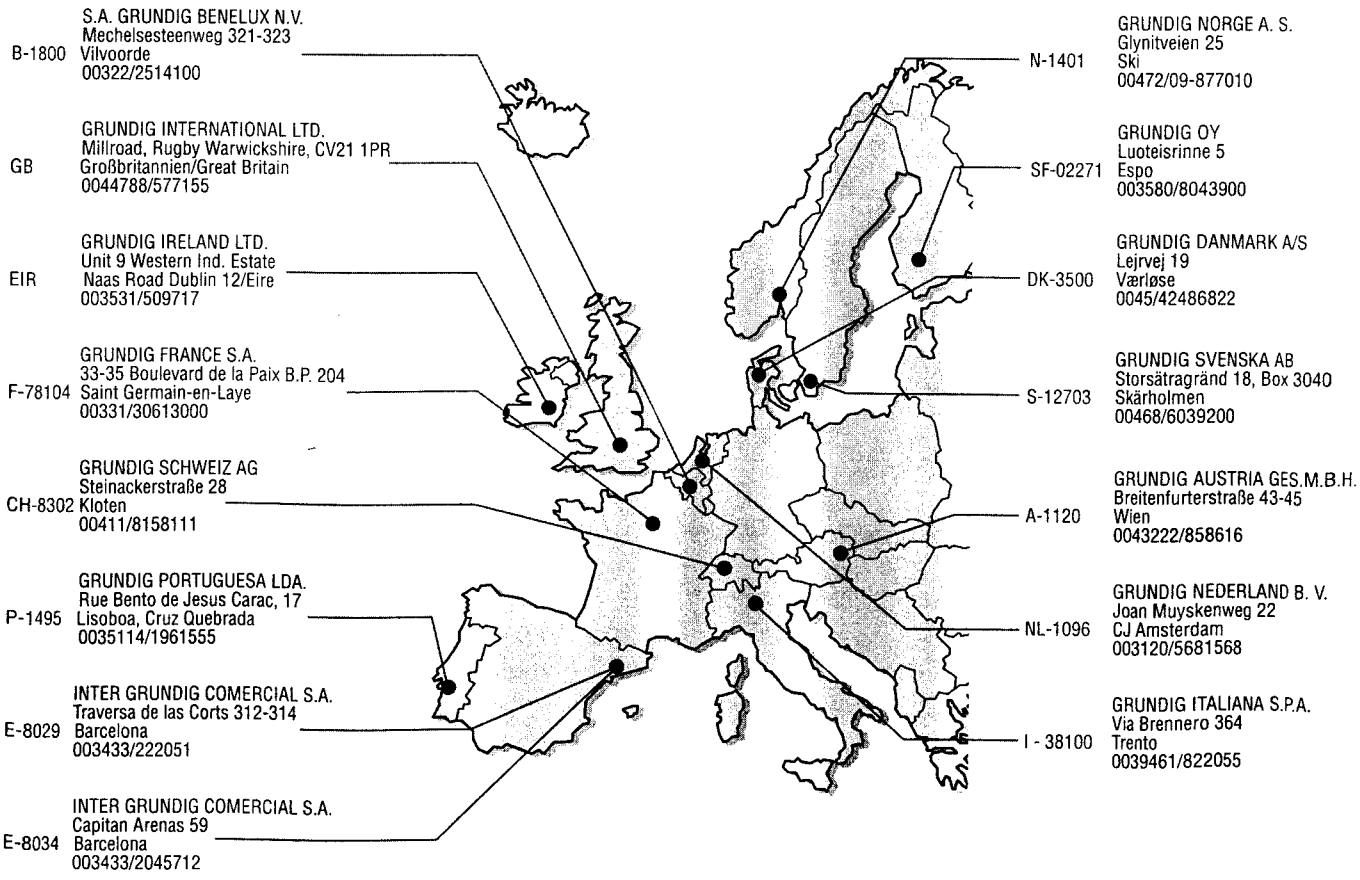
E. and O.E.
Subject to alteration

8. Valuable Information

GRUNDIG Servicing in Germany


W- 3014 Karlsruherstr. 4 Laatzen 1 0511/87004-0
W- 4800 Reichenbergerstr. 40 a Bielefeld 1 0521/204015
W- 4600 Wulfshofstr. 14 Dortmund 1 0231/65570
W- 4000 Marbacherstr.114 Düsseldorf 13 0211/71101-0
W- 5000 Horbellerstr.19 Köln 40 (Marsdorf) 02234/104-0
W- 6800 Dudenstr. 45-53 Mannheim 1 0621/33007-0
W- 7800 Mitscherlichstr. 8 Freiburg i. Breisgau 0761/508036
W- 2000 Kolumbusstr. 14 Hamburg 74 040/733311
W- 1000 Wittestr. 30 c Berlin 27 030/43803-0
W- 3500 Falberbaumstr. 29 Kassel-Waldau 0561/583068
O- 7152 Leipzigerstr. 198 Böhlitz-Ehrenberg 003741/4511121
W- 6236 Frankfurterstr. 100-110 Eschborn/Ts. 06196/400-0
W- 8500 Beuthenerstr. 65 Nürnberg 50 0911/479-0
W- 8000 Werinherstr. 71 München 90 089/6228-0
W- 7016 Dieselstr. 19-21 Gerlingen 07156/2003-0

GRUNDIG Servicing in Europe


B-1800 S.A. GRUNDIG BENELUX N.V. Mechelsesteenweg 321-323 Vilvoorde 00322/2514100
GB GRUNDIG INTERNATIONAL LTD. Millroad, Rugby Warwickshire, CV21 1PR Großbritannien/Great Britain 0044788/577155
EIR GRUNDIG IRELAND LTD. Unit 9 Western Ind. Estate Naas Road Dublin 12/Eire 003531/509717
F-78104 GRUNDIG FRANCE S.A. 33-35 Boulevard de la Paix B.P. 204 Saint Germain-en-Laye 00331/30613000
CH-8302 GRUNDIG SCHWEIZ AG Steinackerstraße 28 Kloten 00411/8158111
P-1495 GRUNDIG PORTUGUESA LDA. Rue Bento de Jesus Carac, 17 Lisoboa, Cruz Quebrada 0035114/1961555
E-8029 INTER GRUNDIG COMERCIAL S.A. Traversa de las Corts 312-314 Barcelona 003433/222051
E-8034 INTER GRUNDIG COMERCIAL S.A. Capitan Arenas 59 Barcelona 003433/2045712
N-1401 GRUNDIG NORGE A. S. Glynitveien 25 Ski 00472/09-877010
SF-02271 GRUNDIG OY Luoteisrinne 5 Espo 003580/8043900
DK-3500 GRUNDIG DANMARK A/S Lejrvej 19 Værløse 0045/42486822
S-12703 GRUNDIG SVENSKA AB Storsätragränd 18, Box 3040 Skärholmen 00468/6039200
A-1120 GRUNDIG AUSTRIA GES.M.B.H. Breitenfurterstraße 43-45 Wien 0043222/858616
NL-1096 GRUNDIG NEDERLAND B. V. Joan Muyskenweg 22 CJ Amsterdam 003120/5681568
I - 38100 GRUNDIG ITALIANA S.P.A. Via Brennero 364 Trento 0039461/822055

GRUNDIG

VIDEORECORDER GV 280 S VPT

Part 2

English

Contents

Page

1 Archive System

Explanatory notes for the archive system 4
All options at a glance 5
Semi-automatic post-archiving 6-9
Manual post-archiving 10-14
Finding out the cassette contents and changing/erasing data in the archive 15-18
Searching for a title – according to category and/or keywords 19-23
Available recording capacity 24-25
"Flipping through" the archive 26
Creating a new category 27-28
Changing the cassette number 28

2 The Digital Picture Functions

Digital picture functions/video effects for the macro-picture 29-30
Digital picture functions with micro-picture 31-32
Recording the digital picture functions 33

3 Fade Functions

Fading scenes in/out, with colour fading 34-36
Fading scenes in/out, with interframe fading 37-39

4 Superimpose Functions

Superimpose function 40-41
Genlockimpose function 42-43
Recording the superimpose and genlockimpose functions 44

5 Arranging a Title Page

Procedure for arranging a title page 45
Tips for "arranging a title page" 45-46
Example of "arranging a title page" 47-50

6 Arranging Text-/Graphics Boxes

Example of arranging text/graphics boxes 51-55

Contents

Page

7 The Multi-Audio System

The recorder as a hifi audio tape player 56-58
Simultaneous mix sound track 59
Adding a sound track, dubbing, trick, mix 60-63

8 Special Functions

Operation with a second recorder 64
Operation with a second S-VHS recorder 65
Operation with a camcorder 66
Synchronized tape transfer and editing without loss 67-68
Inserting new recordings at a later date (insert-cut) 69-70
Operation with a GRUNDIG satellite receiver 71-72
Tape transfer with D2-MAC decoder 73
Frame converter 73
Teletext operation with this recorder 74-75
Your recorder as a receiver 76
The combination lock 77
Extracting and changing the time and date 77
The recorder's continuous function 78
Remote controlling the TV set 79
Remote controlling another GRUNDIG video recorder 80

1. Archive System

Explanatory Notes for the Archive System

The GRUNDIG Archive System is an electronic notebook.

You can store up to 700 titles with additional information using the basic version of this system. The Archive System can be expanded to 1400 titles. Inquire at your local electronics store.

While you are working with the Archive System, the word ARCHIV will be displayed on the recorder.

For optimal use of the Archive System, follow these instructions:

1. Automatic archiving

It is necessary that the total playing time and the cassette number have been correctly entered and recognized for you to be able to automatically archive your recordings. To check these data before recording and programming, press the [▭] button.

For example, the following will appear in the display of your recorder:

a) C3 0:20 = total playing time and elapsed playing time
Nº 100 = cassette number

The recorder is now set up for automatic archiving.

b) C3 ---- = total playing time
CASS Nº = a promt to enter the cassette number

Enter the three-digit cassette number with the number buttons [1] ... [0] (for example [1] [0] [0]) and confirm using the [▭] button.
The display indication a) will appear for a short time.
The recorder is now set up for automatic archiving.

c) ----
CASS Nº = a promt to enter the cassette number

Enter the three-digit cassette number with the number buttons [1] ... [0] (for example [1] [0] [0]) and confirm using the [▭] button. If the cassette is already archived, the display indication a) will appear. If a new number was assigned, the display will show:

E ---- = a promt to enter the total playing time
Nº 100 = cassette number

Enter the three-digit total playing time (in minutes) with the number buttons [1] ... [0] and confirm with the [oo] button.
The display indication a) will appear for a short time.
The recorder is now set up for automatic archiving.

2. Cassette number

The cassettes are organized in the archive according to number.
The cassette number is automatically recorded on the tape when you make a recording. After the tape has been measured (ATTS), the total playing time, the elapsed playing time and the number of the inserted cassette will appear in the recorder's display. A menu with the cassette contents will appear on your television screen.

You will always have to enter the cassette numbers for cassettes that have been archived after recording (post-archived cassettes). Enter the three-digit cassette number with the number buttons [1] ... [0] and confirm it with the [▭] button.
A menu with the contents of the cassette will appear on your television screen.

Mark your cassettes with the same number as the number entered into the archive. This will make it easier to allocate the cassette requested by the recorder when using "Title Search".

3. Recording programming

Use Variant 2 for programming stations that broadcast Teletext for recording.
For stations without Teletext, the title and category can be entered immediately using Variant 3.
If you record over another recording, the recorder automatically updates any entries for this cassette in the archive.
This way your archive always has the most current information.

4. Title and category

You can organize your recordings into 15 different categories to have a better overview and to be able to locate titles quickly. You can assign names to 14 of the categories. If a category has an entry allocated to it, it cannot be changed.
The category "DIVERS" is reserved for immediate recordings and for recordings without title archiving. For these recordings the station abbreviation and the starting time will be stored in the archive as the title.

5. Calling up the cassette contents

You can call up the contents (title) of the cassette inserted into the recorder with the [▭] button.

1. Archive System

All Options at a Glance

What do you want do to?	You must do this	You will find the chapter on pages	Explanation
Archive the title of a new programme ... ... automatically	The station offers Teletext pages.	45 - 49 in the first of the operating instructions.	Titles and data are transferred from the station Teletext pages to the recorder's archive. The title and category can be changed later.
... manually	——	50 - 57 in the first part of the operating instructions.	Works for all immediate TIMER recordings, also for stations that do not offer Teletext.
Archive the titles and data of your cassette collection... ... semi-automatically	During recording "VISS "marks" were recorded.	6 - 9	The archive will list all "earlier" recordings. The starting and stopping points on the tape, and the archiving date, are automatically recorded. Titles can be entered and assigned to a category at a later time.
... manually	——	10 - 14	Data about "earlier" recordings can be entered into the archive.
Find out about the cassette contents and changing data in the archive	Cassette has to be archived.	15 - 18	Quick inquiry about the contents of archived cassettes, for example title, additional information and selecting the title for playback.
Search for title, by category, and/or keywords	Cassette has to be archived.	19 - 23	Enter title, keyword or category, the recorder will indicate the search term and the cassette number after a short time.
Available recording space	Cassette has to be archived.	24 - 25	You can "ask" the archive how much "space" is left on the cassette for new recordings.
"Flip through" the archive		26	Provides information about the entire contents of the archive.
Create a new category	The "DIVERS" category cannot be changed. Categories which have already been given a title cannot be changed.	27 - 28	You can – to optimally designate a title – assign your own names to the categories.
Change the cassette number		28	

1. Archive System

Semi-Automatic Post-Archiving

To archive all of the recordings in your cassette collection. It is necessary, however, that the recordings were taped using a VCR that automatically "places" the marks before recording (VISS = Video Index Search System).
This is provided on all GRUNDIG video recorders manufactured from October 1989 on.

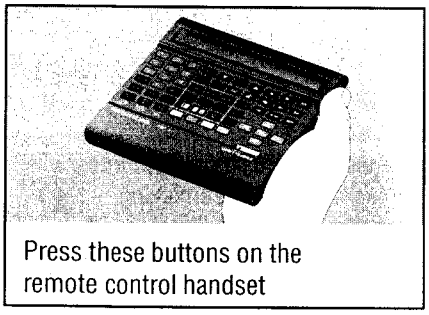
To post-archive cassettes without VISS marks, use the "Manual Post-archiving" function, starting on page 10.

Preparation

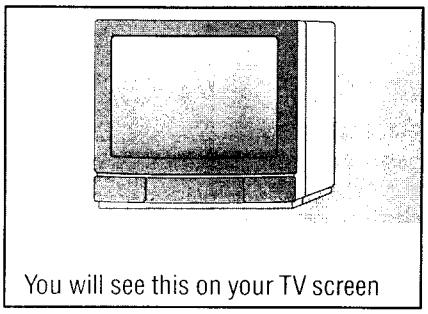
Turn on your television set.

Select the AV programme position for the recorder on the television set.

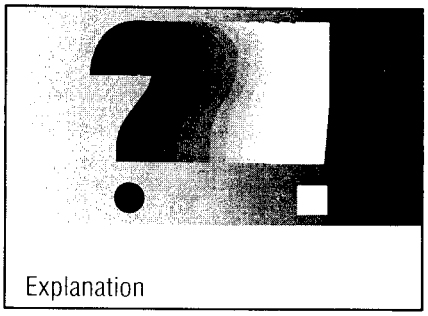
Open the front cover of the recorder.



Press these buttons on the remote control handset

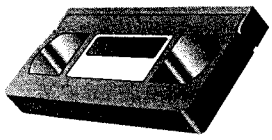


You will see this on your TV screen



Explanation

1. Insert the cassette



This display will appear on the recorder:

C3 ---:--
CASSN?

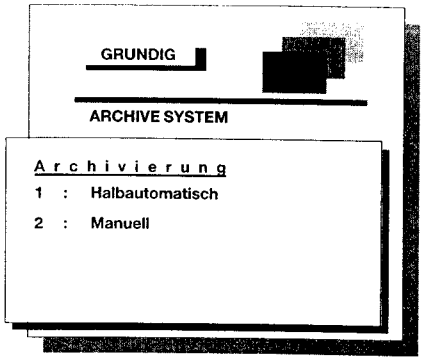
If a non-standard cassette was inserted, the total playing time of the cassette has to be entered with the number buttons [1] ... [0] and confirmed with the [⏏] button (for example [2] [1] [0] for a cassette with 210 minutes playing time).
It is also necessary to enter the playing time for the 5-hour E 300 cassettes.

2. Selecting function

INFO

5

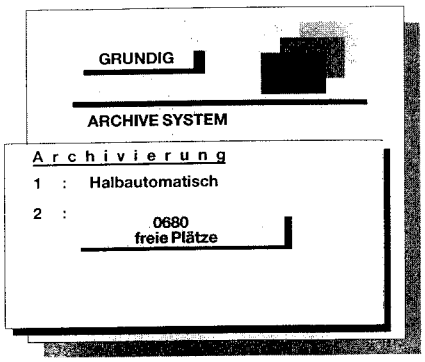
5



Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

3. Selecting semi-automatic post-archiving

1

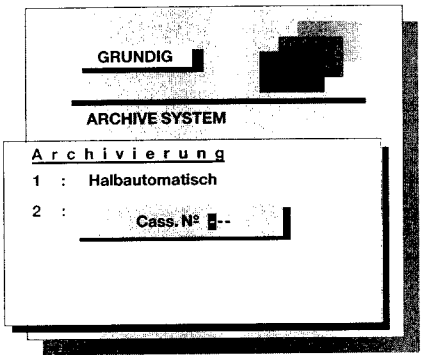


For example, the following information might appear in the menu: "0680 Freie Plätze".

This means that 680 places are available for archiving titles.

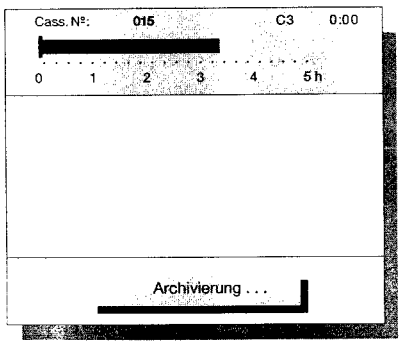
4. Enter the three-digit cassette number

1 ... 0



In the example 0 1 5 for number 15.

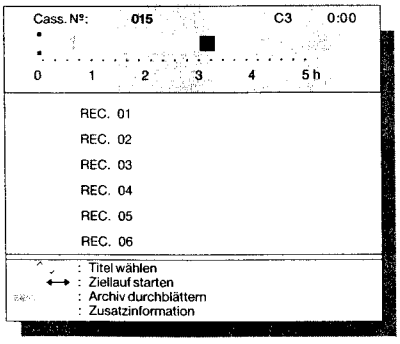
If you did not insert a standard hour cassette, the prompt "Spielzeit eingeben" (enter playing time) will appear and the recorder switches automatically to the Info Menu.
Start again with point 1 of this chapter.



The recorder rewinds the tape to the beginning. The recorder automatically searches the tape for recordings (VISS marks).
All recordings will be shown on the menu, the markings on the bar will show the current tape location.

For cassettes without VISS marks, the message "Cass-Nr. 015 Kein Eintrag" (Cass No. 015 No Entry) will appear.

To post-archive these cassettes, use the "Manual Post-Archiving" function, on page 10.

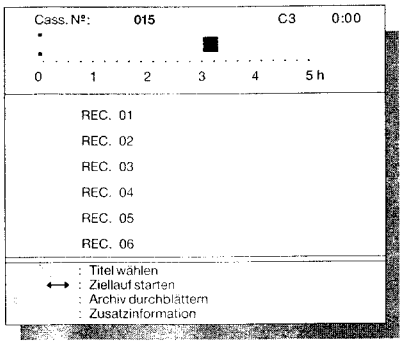


At the end of the tape, the recorder will rewind to the beginning. Now you can give titles to the recordings, as you wish.

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

5. Choosing a recording

▼ or ▲

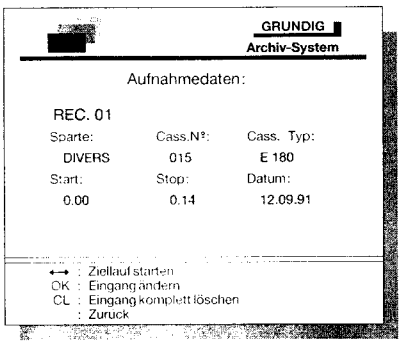


With the [ ] (red) and [ ] (green) buttons, other functions can be selected (Please read the "Flipping through the archive" chapter on page 26.).

If the recorder finds more than 6 titles on the cassette, they will be listed on the next menu. To call this menu up onto the screen, press the ▶ button.

6. Entering data for recording

[ ] (blue)



The title and category are important data for locating the recording at a later date.

The start (begin recording) and stop (stop recording) data are automatically recorded.

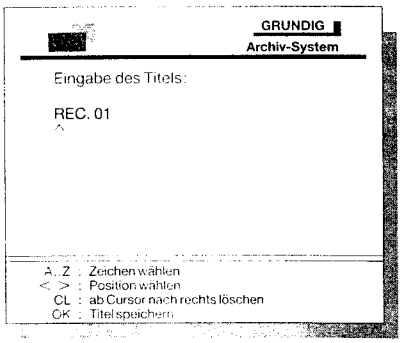
7. Entering the title

OK

a) Enter letter/character

A ... Z

. ... /



You can enter a title of up to 30 letters/characters.

If you need upper-case letters, press the SHIFT button before entering the letter.

If you need special symbols, switch over to the keypad on the remote control with the S-TYP button.

The inserted piece of paper has a list of the available letters/characters.

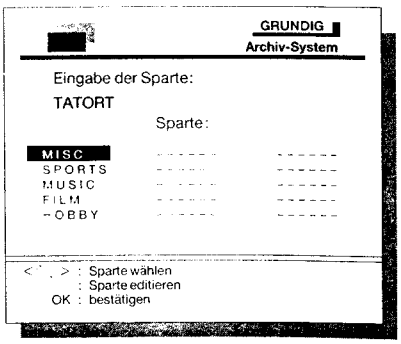
When you need a space, press the SPACE button.

Move the cursor to the left or the right with the ◀ button or the ▶ button.

You can clear the text to the right of the cursor with the CL button.

b) Storing the title

OK



If a "blank title" is stored, "REC." appears as the title.

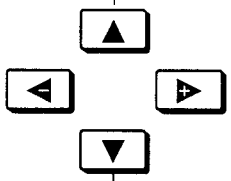
▶▶

1. Archive System Semi-Automatic Post-Archiving

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

8. Allocating a title to a category

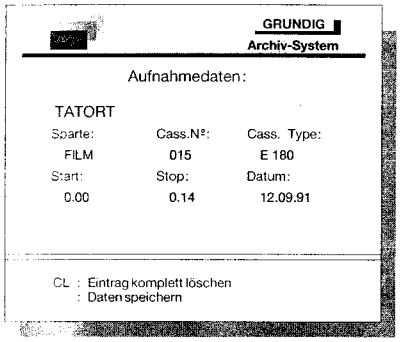
a) Select category



If you need to create a "new" category, you can assign a name to it yourself. Instructions to do this are on page 27, in the chapter "Creating a New Category".

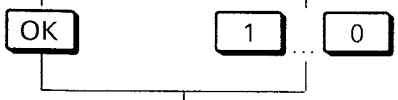
In the example, the category "FILM" was selected.

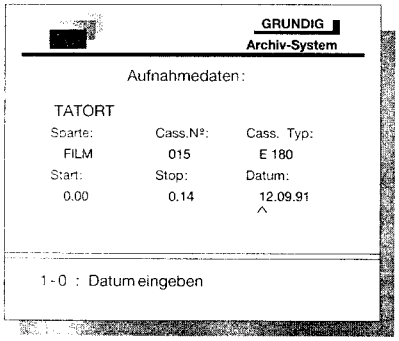
b) Confirming a category



9. Date ...

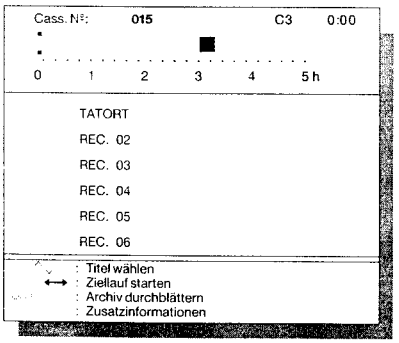
a) confirm or b) reenter (max. 6 places)





10. Storing recording data

(blue)



The new title name will appear in the menu.

Following this example you can assign titles to the following recordings. Start again with point 5 of this chapter.

11. Ending post-archiving

1. Archive System

Manual Post-Archiving

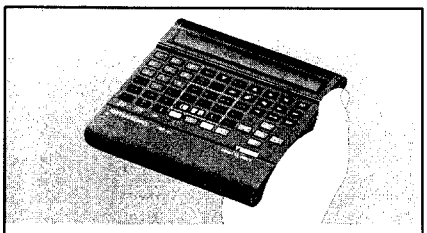
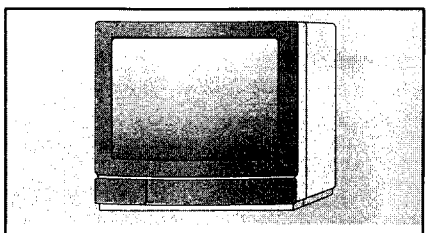
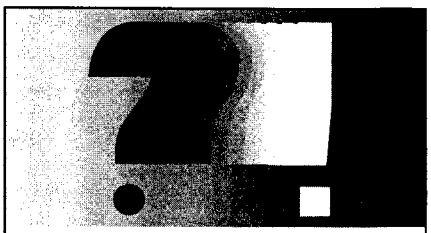
To archive all of the recordings in your cassette collection.
Use the "manual post-archiving" for recordings that were taped using recorders without the VISS.

Preparation

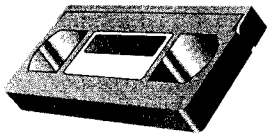
Turn on your television set.

Select the AV programme position for the recorder on the television set.

Open the front cover of the recorder.

 Press these buttons on the remote control handset	 You will see this on your TV screen	 Explanation

1. Insert the cassette



This display will appear on the recorder:

CASSN?

You will, however, not enter the cassette number until step 6.

If a non-standard cassette was inserted, the total playing time of the cassette has to be entered with the number buttons [1] ... [0] and confirmed with the [oo] button (for example [2] [1] [0] for a cassette with 210 minutes playing time).
It is also necessary to enter the playing time for the 5-hour E 300 cassettes.

Since there can be small deviations in the playing time displays of different recorders, it is recommended that you compare the playing time data in your notebook to the beginning and ending of the respective recording.
You can execute this quickly with the search function.

▶▶

1. Archive System Manual Post-Archiving

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

2. Checking the playing time (beginning and ending) of the individual recordings

a) Entering the three-digit playing time

[1] ... [0]

b) Starting the directed search

[↔]

c) Ending playback

[⏻]

The recorder automatically winds the tape to the desired place and switches to playback.
Now check to see if the beginning or the end of the recording is shown on the screen. If so, these times can be entered into the Archive System (see points 8 and 9).
If the beginning/end of the recording has not yet been reached, search for the position with the picture search funcion (buttons [◀◀] or [▶▶]) and enter the playing time that is indicated in the recorder's display into the Archive System (see points 8 and 9).
Repeat this checking process for the following recordings, then you can begin the "manual post-archiving."

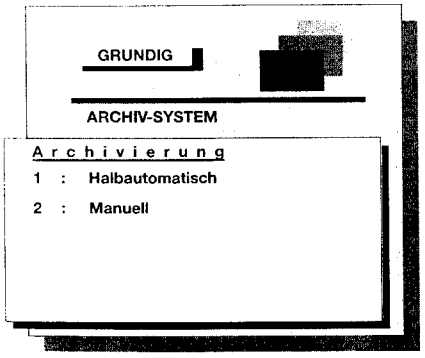
3. Selecting manual post-archiving

[INFO]

[5]

[5]

[2]



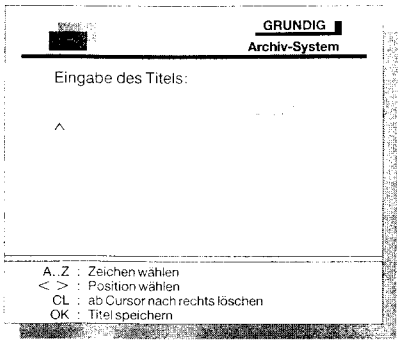
Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

4. Entering the title

a) Selecting letters/characters

A ... Z

. ... /



You can enter a title of up to 30 letters/ characters.

If you need uppercase letters, press the SHIFT button before entering the letter.

If you need special symbols, switch over to the keypad on the remote control with the S-TYP button.

The inserted piece of paper has a list of the available letters/characters.

When you need a space, press the SPACE button.

b) Storing the title

OK

Move the cursor to the left or the right with the ◀ button or the ▶ button.

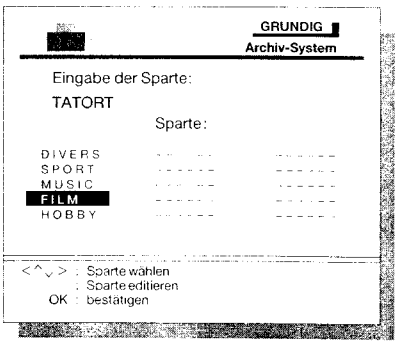
You can clear the text to the right of the cursor with the CL button.

If a "blank title" is stored, "REC." appears as the title.

5. Allocating a title to a category

a) Selecting a category

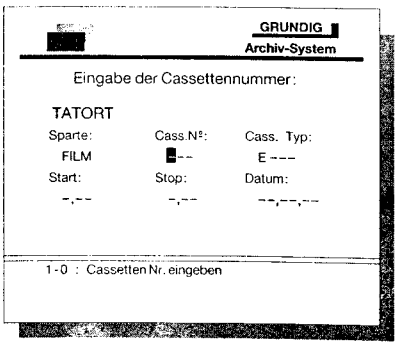
▲ ◀ ▶ ▼



If you need to create a "new" category, you can assign a name to it yourself. Instructions to do this are on page 27, in the chapter "Creating a New Category".

b) Confirm category

OK



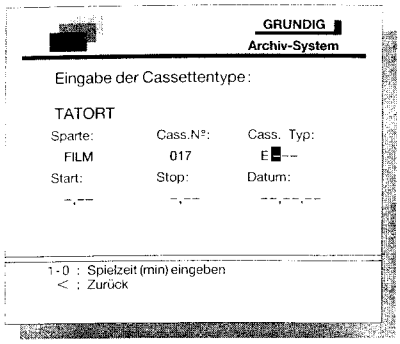
After confirming, the cursor (▮) skips to the first place of the cassette number.

▶▶

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

6. Enter the three-digit cassette number

1 ... 0



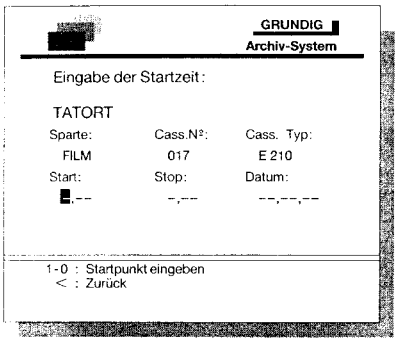
In the example, 0 1 7 for cassette number 17.

The cursor (▮) will skip to the first place of the cassette type.

If titles are already archived under this cassette number, the archive accepts the total playing time and the last stopping point as the starting point for the next entry.
The cursor (▮) will skip to the first stop place. Continue with the instructions from point 9.

7. Enter the three-digit cassette type

1 ... 0



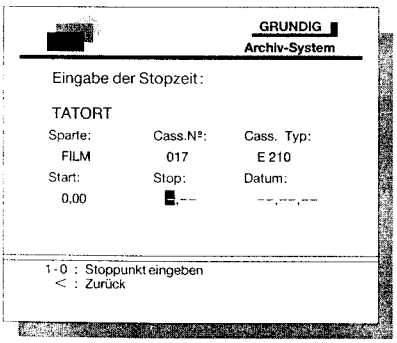
In the example 2 1 0 for an E 210 cassette.

The cursor (▮) will skip to the first start place.

If titles are already archived under this type of cassette, the cassette type cannot be changed.

8. Entering the three-digit starting point

1 ... 0



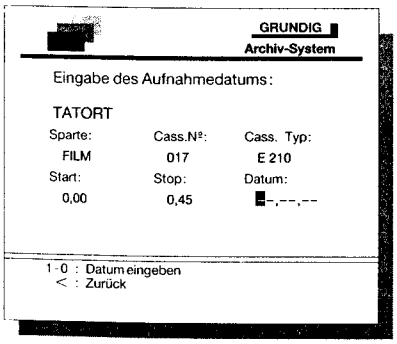
With the starting time the tape position is marked where the recording begins.

In the example, 0 0 0 for 0 hours, 0 minutes.

The cursor (▮) will jump to the first stop place.

9. Entering the three-digit stopping point

1 ... 0



With the stopping time the tape position is marked where the recording ends.

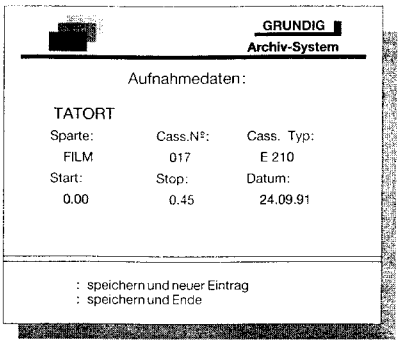
In the example 0 4 5 for 0 hours, 45 minutes.

The cursor (▮) will skip to the first place for the date.

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

10. Entering the 6-digit date

1 ... 0



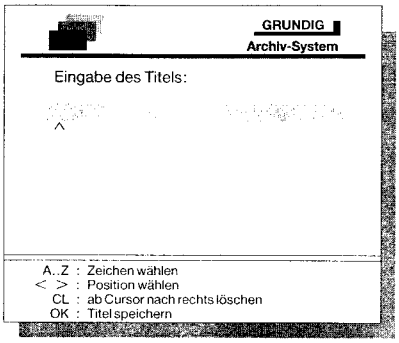
You can enter any date, for example, when the title was recorded or when the title was archived.

In the example, 2 4 0 9 9 1 for September 24, 1991.

11. Entering the next title

or

(yellow)

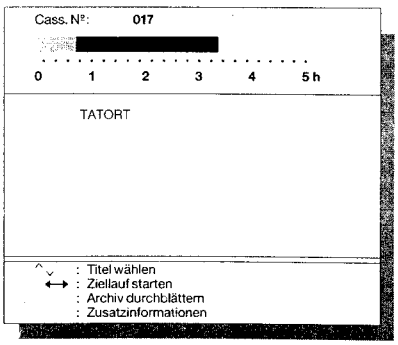


To post-archive more titles, repeat the procedure starting with point 4.

With other entries for the same cassette, the cassette type and starting point (= stopping point of the last entry) are automatically recorded.
The cassette type cannot be changed.

12. Ending post-archiving

(blue)



The title of the cassette last archived will appear on the menu.

You will see the current TV picture

1. Archive System

Finding out about the Cassette Contents and Changing/Erasing Archive Data

The following information and functions are offered.
- Which and how many titles are on the cassette?
- Selecting titles for playback.
- Calling up additional information about the titles.
- Modifying data in the archive (title, category and date).
- Completely erasing the archive entries.

You also need this function when you have started a recording without title archiving (for example immediate recording) and you only want to change the title and category.

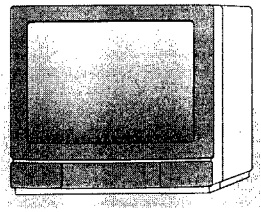
Preparation

Turn on your television set.

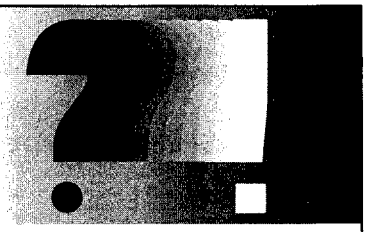
Select the AV program position for the recorder on the television set.

Open the front cover of the recorder.

Press these buttons on the remote control handset



You will see this on your TV screen



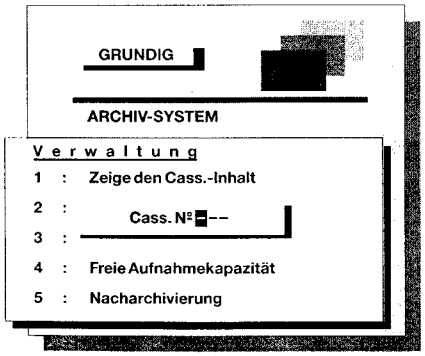
Explanation

1. Selecting a function

INFO

5

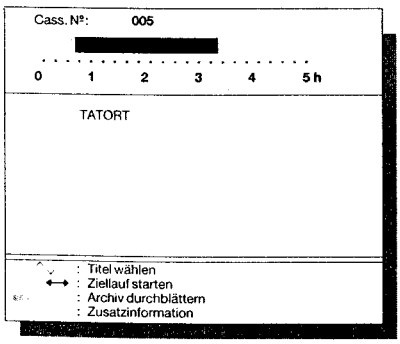
1



The prompt "Cass. Nº ---" requests you to enter the number of the desired cassette.

2. Entering the three-digit cassette number

1 ... 0



In the example, 0 0 5 for cassette 5.

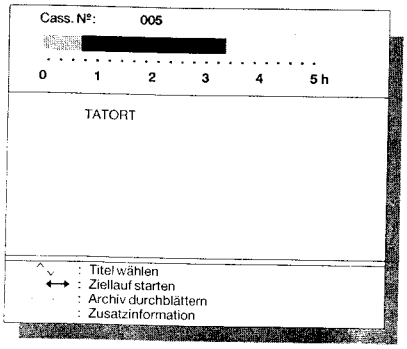
If the cassette number hasn't been archived yet, the message: "Cass. Nº 005 Kein Eintrag" (Cass. Nº 005 No Entry) will appear.

The menu will display the first six titles on the cassette.

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

3. Selecting a title

▼ or ▲



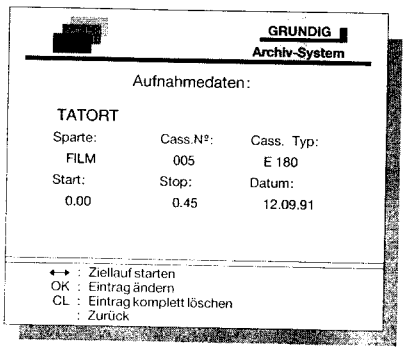
Using this menu you can ...
- ... call up additional info (see point 3.1), or
- ... "flip through" the archive (see point 3.2), or
- ... select a title for playback (see point 3.3), or
- ... end a function (see point 3.4).

To go to the next menu with more titles, press the ▶ button.

3.1 Additional Information

a) call up

(blue)



The data for the selected titles are shown on the menu.

You can now return to the menu with all the titles by pressing the (blue) button,
or
change the additional info.

b) change

OK

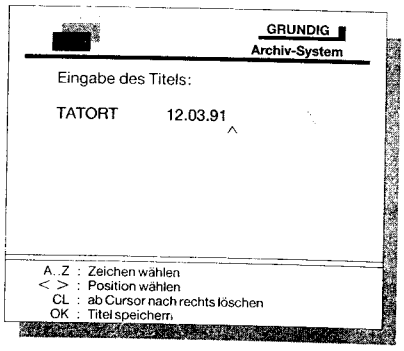
The title – with all its data – can be erased by pressing the CL button.

If you do not want to change the title or the data, press the OK button and continue with the instructions starting with point 3.1 d.

c) change a title

A ... Z

. ... /



If you need upper-case letters, press the SHIFT button before entering the letter.

If you need special symbols, switch over to the keypad on the remote control with the S-TYP button.

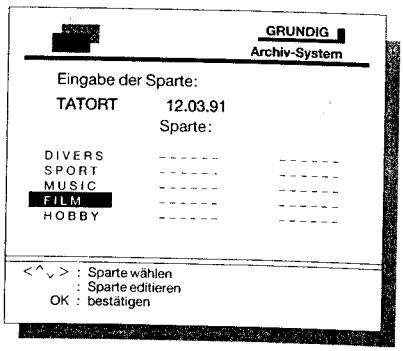
The inserted piece of paper has a list of the available letters/characters.

When you need a space, press the SPACE button.

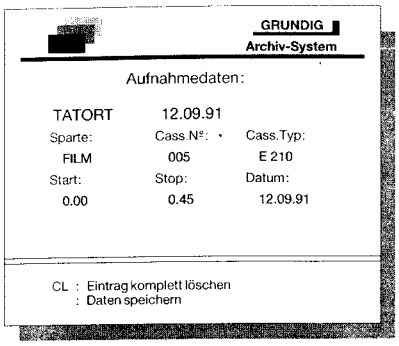
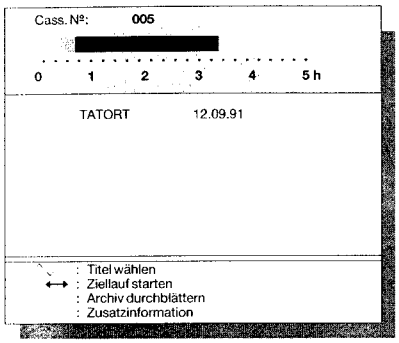
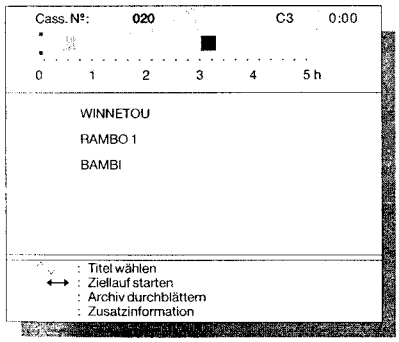
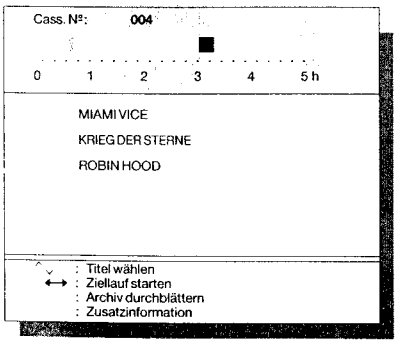
Move the cursor to the left or the right with the ◀ button or the ▶ button.

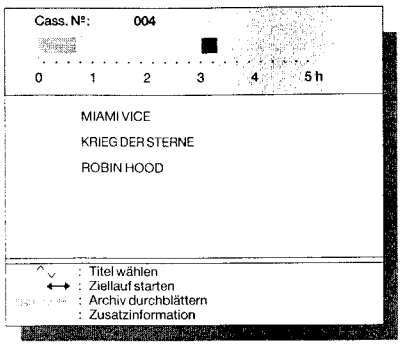
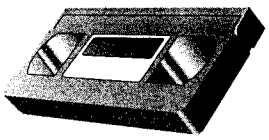
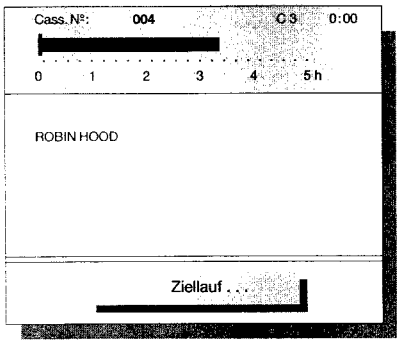
You can clear the text to the right of the cursor with the CL button.

OK



If a "blank title" is stored, "REC." appears as the title.

Press these buttons on the remote contrrol handset	You will see this on your TV screen	Explanation
d) Assigning the title to another category ▲ ◀ ▶ ▼ OK		Press the OK button if you do not want to change the category. If you need to create a "new" category, you can assign a name to it yourself. Instructions to do this are on page 27 in the chapter, "Creating a New Category".
e) Storing additional information (blue)		The menu with the cassette titles will reappear. Starting with this menu, you can "flip through" the entire archive.
3.2 "Flipping through" the archive (green)		Shows the contents of the following cassettes.
or (red)		Shows the contents of the previous cassette. Unassigned cassette numbers will be skipped. The number of the inserted cassette is highlighted in yellow.

Press these buttons on the remote contrrol handset	You will see this on your TV screen	Explanation
3.3 Selecting a title and starting the directed search		To switch to the next menu with more titles, press the ▶ button.
a) Starting search		The recorder will ask you to insert the appropriate cassette.
b) Inserting a cassette 		Insert the cassette with the required number. The recorder will wind the tape automatically to the beginning of the selected title and start playback.
c) Ending playback		

3.4. Ending the function

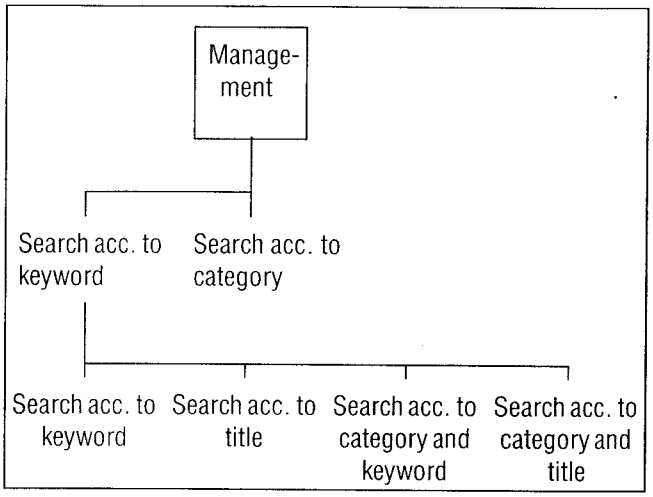
Necessary after the operating steps 1 to 3.2.

You will see the current TV picture.

1. Archive System

Searching for a Title – According to Category and/or Keywords

You can find your archived titles with this function.
You can search based on different criteria. Depending on the entry, the Info Menu will display either the concrete title or a number of titles.
The diagram shows the search criteria and the possible combinations



Preparation

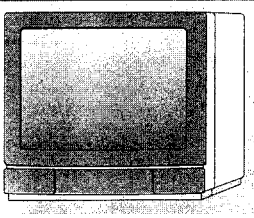
Turn on your television set.

Select the AV programme position for the recorder on the television set.

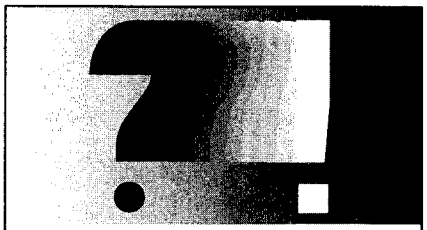
Open the front cover of the recorder.

Search acc. to category

Press these buttons on the remote control handset



You will see this on your TV screen

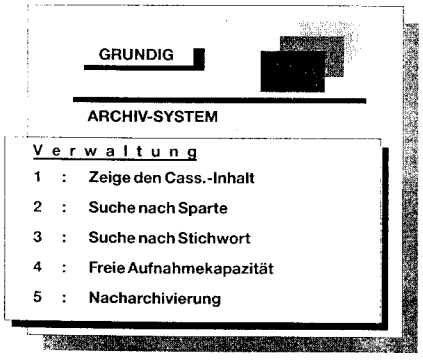


Explanation

1. Selecting a function

INFO

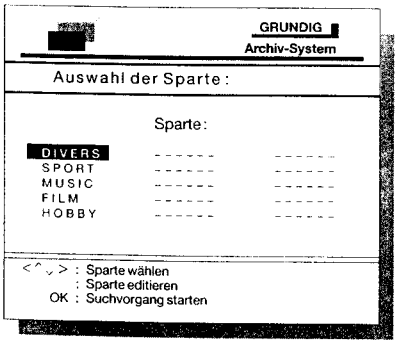
5



Select the "Suche nach Sparte" (search acc. to category) function from this menu.

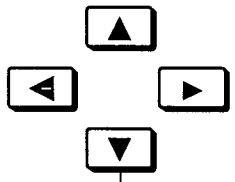
2. Select "Suche nach Sparte" (search acc. to category)

2

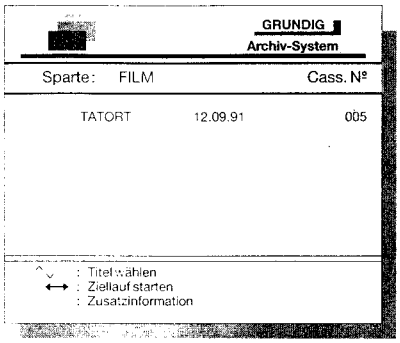


Press these buttons on the remote contrrol handset	You will see this on your TV screen	Explanation

3. Selecting a category



4. Starting the search



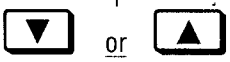
The recorder will display all titles that it finds under the selected catetory.

If the category is "empty", the message "Kein Eintrag" (No Entry) will appear.

If the desired title is in the category, you can start the "Ziellauf" (search) (see point 6).

If several titles are listed, you can select the desired title with the ▼, ▲ or ▶ keys (see point 5).

5. Selecting a title



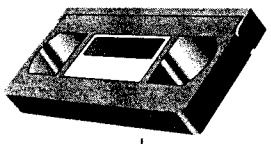
If more than 6 titles are found in the category, you will find them on the next menu. You can switch the next menu with the ▶ key.

With the blue button (blue) information about the titles can be called up.
You can return to the title overview with the blue button (blue).

6. Start the directed search

The recorder will promt you to insert the necessary cassette.

7. Inserting the cassette



Insert the cassette with the appropriate number.

The recorder will wind the tape to the beginning of the title and will begin to play back.

8. Ending play back

Searching according to keyword or title

You have several options:

Searching according to keyword

You do not have to enter the exact word sequence of the title. It suffices to enter a word or a part of a word that appears in any part of the title. It does not matter if you type in lower- or upper-case letters.

Example: Title sought "From Research and Technology"

Possible enteries for the search term
"From Research and Technology", or
"Research", or
"Technology", or
"Tech", or
"nology".

The search is somewhat slower and many titles may be listed – depending on the search term.

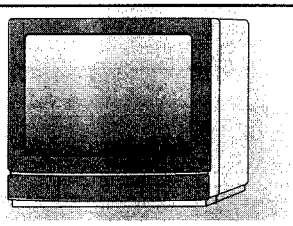
Searching according to title-

The search will be quick, but the title has to be entered exactly as it has been stored (including spaces).
Only the title you are looking for will be shown.

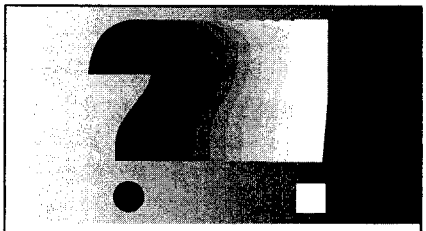
Searching according to keyword/title and category

You can limit your search if you know which category your title is listed under.
The recorder will search for the keyword/title only in the selected category.

Press these buttons on the remote control handset



You will see this on your TV screen



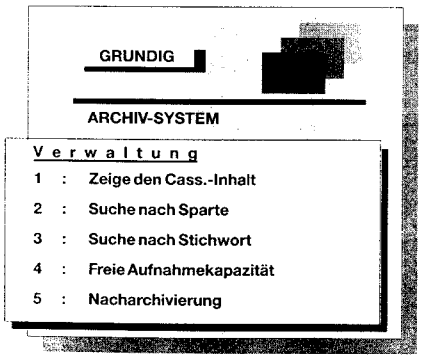
Explanation

1. Selecting a function

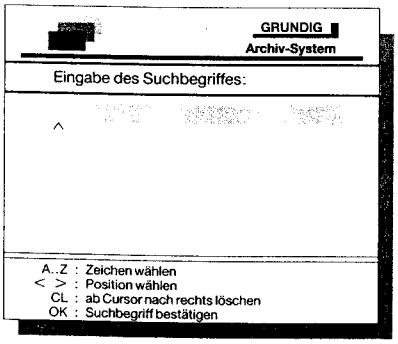
INFO

5

3



Select "Suche nach Stichwort" (Search acc. to keyword) from this menu.

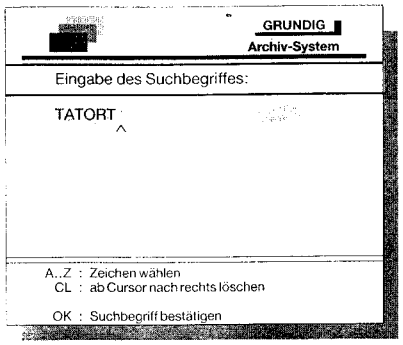


Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

2. Entering a search term

A ... Z

. ... /



If you need upper-case letters, press the SHIFT button before entering the letter.
If you need special symbols, switch over to the keypad on the remote control with the S-TYP button.

The inserted piece of paper has a list of the available letters/characters.

When you need a space, press the SPACE button.

Move the cursor to the left or the right with the ◀ button or the ▶ button.

You can clear the text to the right of the cursor with the CL button.

3. Confirming search term

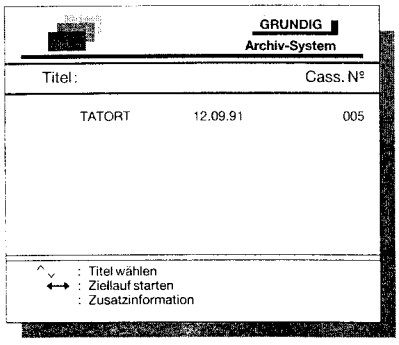
OK

According to which criteria should the recorder search?
- title (see point 4. a)
- keyword (see point 4. b)
- titel with category (see point 4. a and 4. c)
- keyword with category (see point 4. b and 4. c).

4. Starting search

a) acc. to title or b) acc. to keyword

(red) (green)

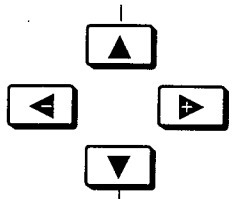
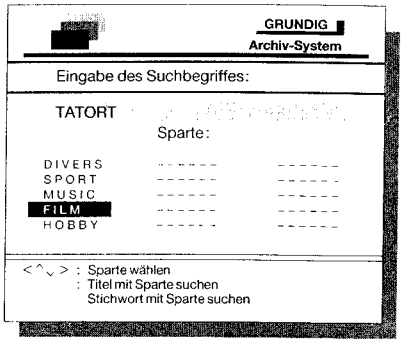
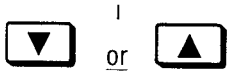
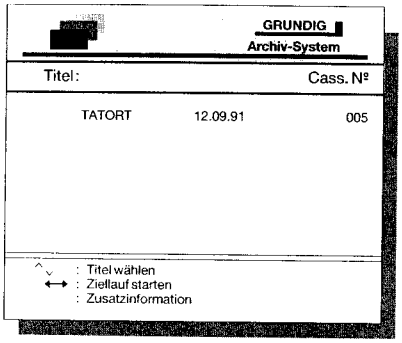
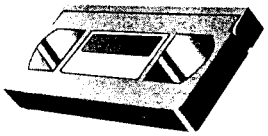


The recorder will search for the title in the Archive System and will display it along with the number of the cassette.

and

The recorder will search for the title according to keyword and will list titles with the same letter sequence. You will see the corresponding cassette number next to the title.

1. Archive System Searching According to Keyword or Title

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation
c) additionally acc. to category 		Select the desired category with the ◀, ▶, ▼ or ▲ buttons, then start the search with the buttons ■ (red) or ■ (green). If the recorder does not find the title/ keyword under the selected category, the message "Kein Eintrag" (No Entry) will appear. If more than six titles are found, they will be listed on the next menu. You can switch to the next menu with the ▶ button.
5. Selecting title for playback 		Only necessary when several titles are listed on the menu. You can recall information about the titles with the ■ button (blue). Return to the title overview with the ■ button (blue).
6. Starting directed search 		The recorder will promt you to insert the appropriate cassette.
7. Inserting the cassette 		Insert the cassette with the appropriate number. The recorder will wind the tape to the beginning of the title and will start playback.
8. Ending playback 		

1. Archive System

Available Recording Capacity

You can find out how much room is left on the cassette for new recordings.

The recorder will show the archived cassettes, listed by number, below the indication of the cassette type and the available recording capacity.

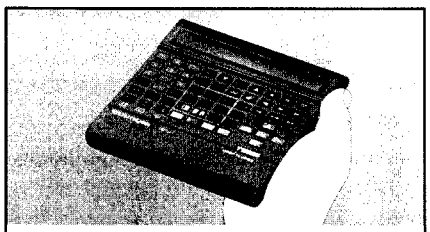
With the directed search function you can go to the available portion of the tape in order to start a new recording there.

Preparation

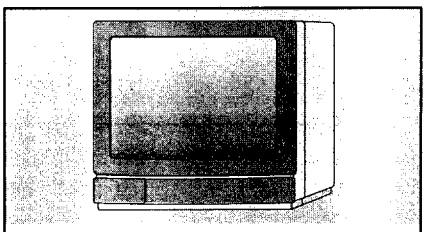
Turn on your television set.

Select the AV programme position for the recorder on the television set.

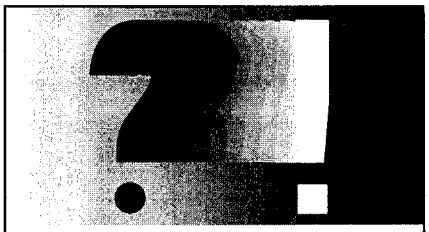
Open the front cover of the recorder.



Press these buttons on the remote control handset



You will see this on your TV screen

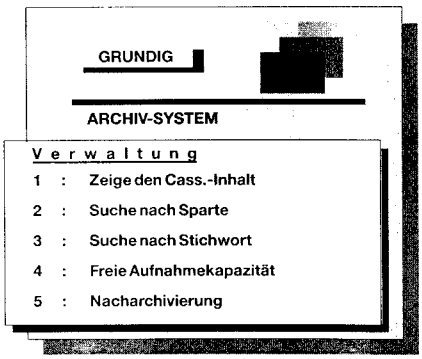


Explanation

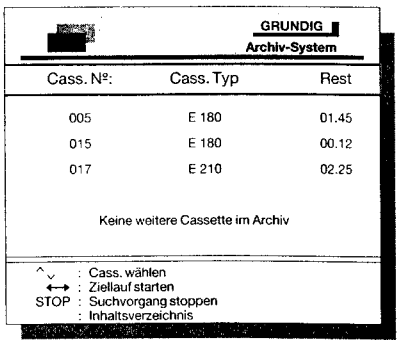
1. Selecting the function

INFO

5



4



The recorder will list all archived cassettes.
The remaining playing time will be shown under the category "Rest".

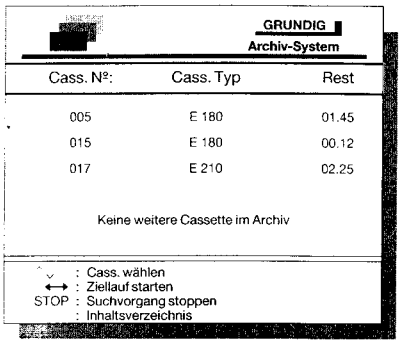
Press the STOP button to end listing of more cassettes.

1. Archive System Available Recording Capacity

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

2. Selecting a cassette

▼ or ▲



You can call up information on the selected cassette with the [ ] button (blue).

You can switch back to the cassette overview with the [ ] button (blue).

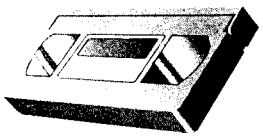
For more cassettes switch to the next menu with the ▶ button.

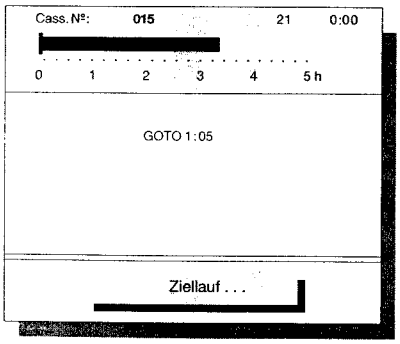
3. Starting directed search

↔

The recorder will promt you to insert the appropriate cassette.

4. Inserting cassette





Enter the cassette with the appropriate number.

The recorder will wind the tape to the blank portion and then stop. You can start the next recording here.

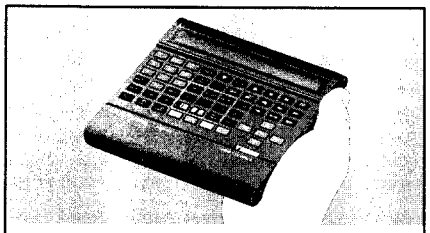
1. Archive System

"Flipping through" the Archive

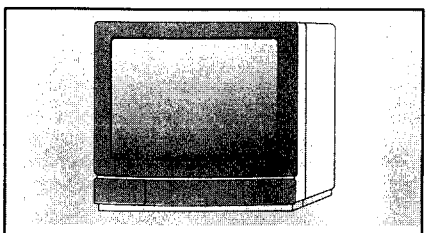
Preparation

Turn on your television set.

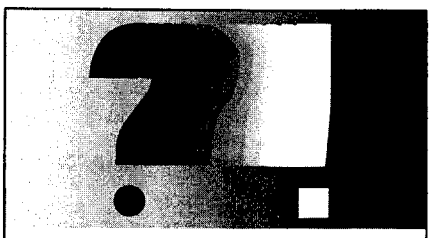
Select the AV programme position for the recorder on the television set.



Press these buttons on the remote control handset



You will see this on your TV screen



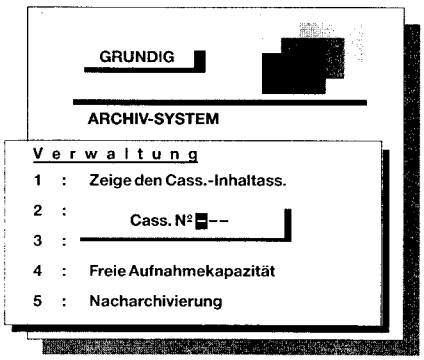
Explanation

1. Selecting function

INFO

5

1



Enter an archived cassette number.

2. Entering the three-digit cassette number

1 ... 0

In the example, 0 0 5 for cassette 5.
Now you can "flip through" the archive.

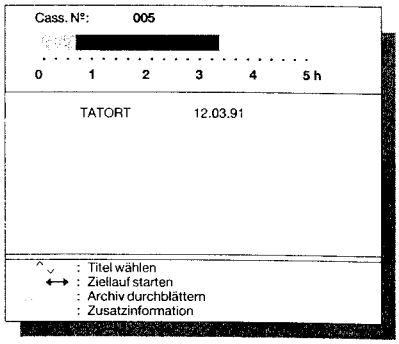
3. "Flipping through" the archive

a) in ascending numerical order

(green)

b) in descending numerical order

(red)



Each time you press the button, an archived cassette with titles will be listed.
Unassigned cassette numbers will be skipped.
The number of the inserted cassette is highlighted in yellow.

4. Ending the function

You will see the current television picture.

1. Archive System

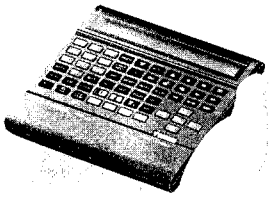
Creating a New Category

You can create a new category or change an existing category.

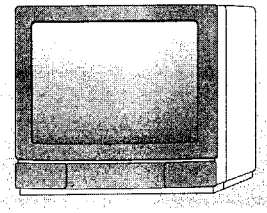
Preparation

Turn on your television set.

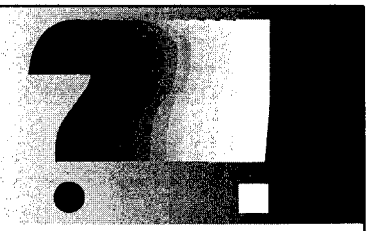
Select the AV programme position for the recorder on the television set.



Press these buttons on the remote control handset



You will see this on your TV screen



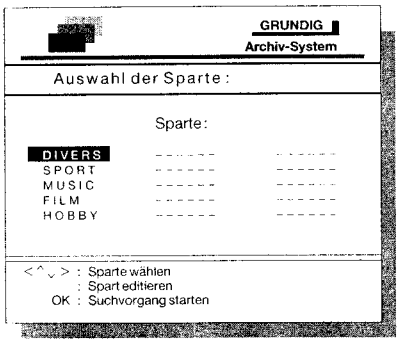
Explanation

1. Selecting function

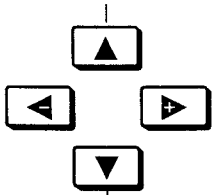
INFO

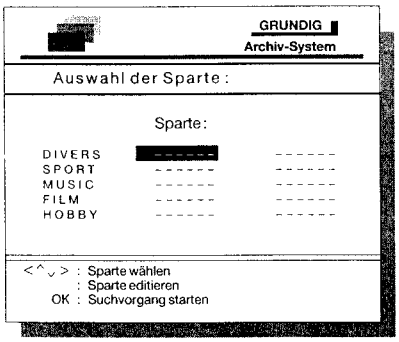
5

2



2. Selecting category





You cannot change the "DIVERS" (MISC) category.

Select the category whose name will be changed or select an empty category. The selected category will be marked with blue.

Press these buttons on the remote control handset	You will see this on your TV screen	Explanation

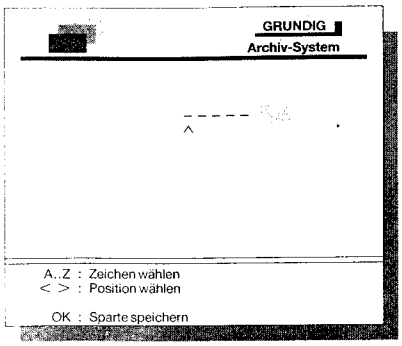
3. Enter the name of the category

(green)

a) Select letter/character

A ... Z

. ... /



You can enter 6 letters/characters for the title.

If you need uppercase letters, press the SHIFT button before entering the letter.
If you need special symbols, switch over to the keypad on the remote control with the S-TYP button.

The inserted piece of paper has a list of the available letters/characters.

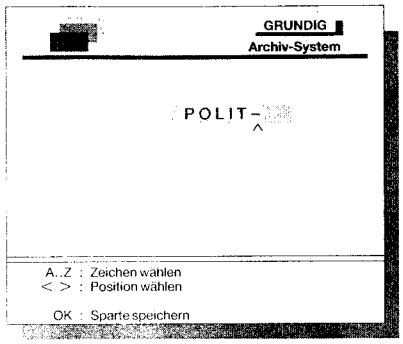
When you need a space, press the SPACE button.

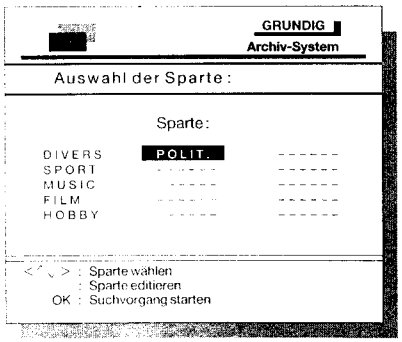
Move the cursor to the left or the right with the ◀ button or the ▶ button.

Then you can store the name of the category.

b) Store name

OK





4. Ending function

⏻

You will see the current television picture

Changing the Cassette Number

This could be necessary if you want to record over an archived cassette and want to assign it a new cassette number.

Press the number buttons 8 5 9 6 consecutively and then press the OK button.

Enter the new three-digit cassette number with number buttons 1 ... 0 and confirm it with the ⏻ button.

2. The Digital Picture Functions

Digital Picture Functions/ Video Effects for the Macro-Picture

With the digital picture functions you can ...

... optically change visible pictures on the screen.
The images can come from a TV programme, from another recorder or from a camcorder.
You can record these pictures and also select another picture effect during recording.

... change pictures in the playback mode. This means you can add a second effect to an effect that has already been recorded.

The video effects cannot be used for SECAM television signals because, depending on the picture contents, there could be colour distortion or the function might not work.

Preparation

Turn on your television set.

Select the AV programme position for the recorder on the television set.

If desired, insert the recorded cassette.

Most of the buttons for the following functions are mounted on the inside of the remote control handset.

Storing and recalling a single image of a video recording

Press the ▶ button to start playback.

Press the MEMO button to store the desired image.
You will see the image on the screen for a short time and it will be stored automatically. The playback will then continue.

The image will be stored until you
... store a new image;
... select another digital picture function;
... select the micro picture-in-the-picture function;
... select a fade function;
... select a superimpose function;
... select a genlock impose function;
... press the ⏻ button.

Press the DEMO button to call up an image.
The image will appear on your television screen.
The playback continues (not visible on the screen), and you can still hear the sound.

Press the CL button to switch back to playback.

Storing and recalling images from a TV programme

Select the desired programme on the recorder.
You will see the selected programme on the screen (EE mode).

Press the MEMO button to store the desired image (for example the lottery numbers).
The image will be visible on the screen for a short time and will be stored automatically, the recorder will then switch back to the television picture.

The image will be stored until you
... store a new image;
... select another digital picture function;
... select the micro picture-in-the-picture function;
... select a fade function;
... select a superimpose function;
... select a genlock impose function;
... press the ⏻ button.

Press the DEMO button to call up the image.
The image will appear on your television screen.
The playback continues (not visible on the screen), and you can still hear the sound.

Press the CL button to switch back to playback.

Digital freeze-frame

The picture visible at the moment will be "frozen".

Press the STOP button to "freeze" the picture.

Press the STOP button again to end the freeze-frame function.

Paint effect

The paint effect colours and shades the colour picture.

Press the PAINT button to activate the paint effect.

Press the PAINT button again to end the paint effect.

2. The Digital Picture Functions in Macro-Picture

Inverse effect

Positive images will be depicted as negative and the colors change.

Press the [ ] button to activate the inverse effect.

Press the [ ] button again to end the inverse effect.

Image distortion effect

The height or width of images will be distorted.
Press the [ ] or [ ] button to activate this effect.

Press the [ ] or [ ] button again to end this effect.

Mirror effect

The images will be alternatively turned upside down or the top or bottom half of the picture will be mirrored.

Consecutively pressing the [ ] button causes:
the bottom half of the picture to be mirrored,
the top half fo the picture to be mirrored,
the entire picture will be mirrored,
the entire picture to be depicted normally.

Mosaic effect

The mosaic effect breaks down the picture into grid points.

Press the [MOSAIC] button to activate the mosaic effect.

The [▶] button increases the mosaic effect the grid points become larger.

The [◀] button decreases the mosaic effect the grid points become smaller.

Press the [MOSAIC] button again to end the mosaic effect.

Strobe effect

With this effect, movements appear to be disjointed and jerky.

Press the [STROBE] button to select the strobe effect.

The [▶] button increases the speed of the picture sequence.

The [◀] button reduces the speed of the picture sequence.

Press the [STROBE] button again to end the strobe effect.

Zoom effect

You can select specific picture cutouts and then enlarge them (max. 16 times).

"Freeze" the picture with the [STOP] button.

Press the [ZOOM] button.
A frame will appear on the screen.

Move the frame with the [▲], [▼], [◀] and [▶] buttons over the picture.

Press the [ZOOM] button repeatedly when you reach the part of the picture you wich to cut out until you reach the desired size (max. 16 times).

Press the [CL] button to end the zoom effect.

Combining digital picture functions

You can combine many of the picture functions described in this chapter.

To do this consecutively press the appropriate buttons for the desired effects.

Recording digital picture functions

Read the chapter on page 33 for instructions.

Ending the digital picture functions

Press the [CL] button.

2. The Digital Picture Functions

Digital Picture Functions with Micro-Picture

The options:

Fade in micro-picture,
Exchange micro-picture for macro-picture,
Exchange sound from micro-picture for macro-picture sound,
"Freeze" micro-picture,
Move micro-picture,
Fade in nine micro-pictures from the same programme,
Fade in nine micro-pictures from different programmes,
Combine micro-pictures with video effects.

The micro-picture-in-the-picture fading can be done during the recorder functions "playback" and "EE mode" (loop through mode).
In the "EE mode" programmes or playback from other recorders or camcorders are "carried" through your recorder and shown on your television set.

You can also record the digital picture functions with micro-picture.

Preparation

Turn on your television set.

Select the AV programme position for the recorder on the television set.

Open the front cover of the recorder.

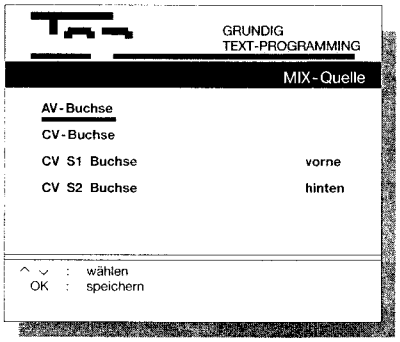
If desired, insert a previously recorded cassette.

Preselection of the micro-picture source

With the micro picture-in-the-picture function, a micro-picture will fade onto the picture on the television screen. You can select the source for the micro-picture.

Call up the Info menu with the [i-⊡] button.

The "MIX-Quelle" ("Mix Source") menu will appear, the selected jack (Buchse) will be marked with blue.



Select the desired micro-picture source with the [▼] or [▲] button and store it with the [OK] button.
The selected micro-picture source will appear "green" the recorder will automatically switch to the TV picture.

To see the picture of the selected source, the source has to be attached to the appropriate jack on the recorder.

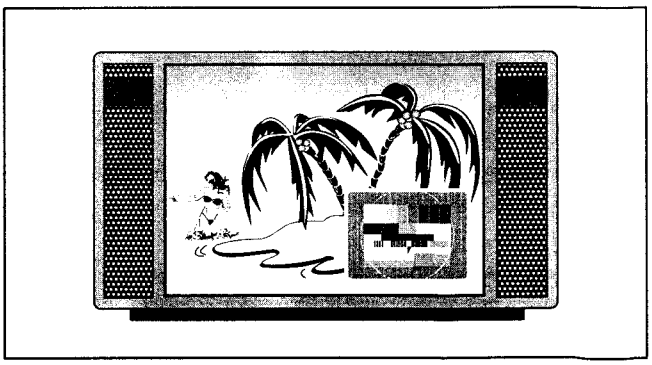
Direct selection of the micro-picture source

First select the micro-picture source:

Select the different recorder program positions with the number buttons [1] ... [0].

Fading in the micro-picture

Press the [PIP] button on the remote control handset.



2. Digital Picture Functions with Micro-Picture

"Exchanging" micro- and macro-pictures

Press the [⇄] button.
The micro-picture will turn into the macro-picture, the macro-picture will turn into the micro-picture.

Selecting the sound for the micro-picture

Press the [◀/▶] button.
You will hear the sound of the micro-picture.

Press [◀/▶] button again.
You will hear again the sound of the macro-picture.

"Frozen" micro-picture-in-the-picture (freeze-frame)

Press the [STOP] button.

Press the [STOP] button again to end this function.

Moving the micro-picture around the screen

With the [▲], [▼], [◀] and [▶] buttons, the micro-picture can be moved anywhere on the screen.

Ending the micro-picture functions

Press the [CL] button.

Fading in nine micro-pictures (multi-scene)

Press the [M-S] button.
You will see nine micro-pictures from the same programme, eight freeze-frames with time lags, and a micro-picture in the middle of the screen with the up-to-date programme.

Each time you press the [M-S] button, the eight freeze-frame pictures will be updated.

If you press the [STOP] button the "moving" micro-picture will be "frozen" and the next micro-picture will show the up-to-date programme.

Repeatedly pressing the [STOP] button will transfer the action over to the next micro-pictures.

Press the [CL] button to end the function.

Fading-in nine programmes (multi-channel)

Possible only in the "EE mode."

Press the [M-C] button.
Nine different programs and their respective station abbreviations will fade onto the television screen.

> If the station isn't transmitting a programme, no micro-picture will appear, and in the place of the station abbreviation you will see this symbol ▤ ?.

The micro-pictures will be consecutively updated in short intervals.

Press the [M-C] button to progress the programmes in micro-pictures picture by picture (starting with the programme number in the recorder's display), each up to nine programmes.

If you want to select a specific station from the programme offerings, enter the desired one- or two-digit programme position with the number buttons [1] ... [0].
You will see the selected programme as a macro-picture on the screen.

Press the [CL] button to end the function.

Combining the digital picture functions

You can also combine some of the video effects (see pages 29 and 30) with the micro-picture functions described in this chapter.
To do this press the buttons for the desired function.

▶▶

2. Digital Picture Functions

Recording the Digital Picture Functions ... ... with your Recorder

Preparation

Turn on your television set.

Select the AV programme position for the recorder on the television set (serves as a monitor).

Open the front cover of the recorder.

Insert a cassette with sufficient playing time that can be recorded on/over.

Recording

Select the desired television programme with the number buttons [1] ... [0] and then press the PROGRAM [▲] button, or select another programme source (for example a satellite receiver, camcorder, etc.) with the corresponding buttons.

A picture/sound signal must always be on-line at the selected programme position/source.

Select the digital picture functions following the instructions on pages 29 to 32.

Press the [●] button longer.
The picture can still be modified during recording, except with the "Exchanging" micro- and macro-pictures function (see page 32), which is only possible when in recording-pause mode.

Press the [⏻] button to stop recording.

Recording the Digital Picture Functions ... ... with another Recorder

Preparation

Turn on the television set.

Select the AV programme position for the recorder on the television set (serves as a monitor).

Open the front cover of the recorder.

Attach the second recorder to the ⊕ EURO-AV ⊖ jack.

Insert a cassette with sufficient playing time that can be recorded on/over.

Recording

Press the number buttons [8] [5] [4] [7] consecutively and then press the [OK] button.

Insert a previously recorded cassette in your recorder and start playback by pressing the [▶] button, or
select the desired TV programme with the number buttons [1] ... [0] and then press the PROGRAM [▲] button.

Select the digital picture functions following the instructions on pages 29 to 32.

Start recording on the second recorder.
The picture can still be modified during recording, except with the "Exchanging" micro- and macro-pictures function (see page 32), which is only possible when in recording-pause mode.

Stop recording on the second recorder.

After recording is finished, press the number buttons [8] [5] [4] [6] consecutively and then press the [OK] button.

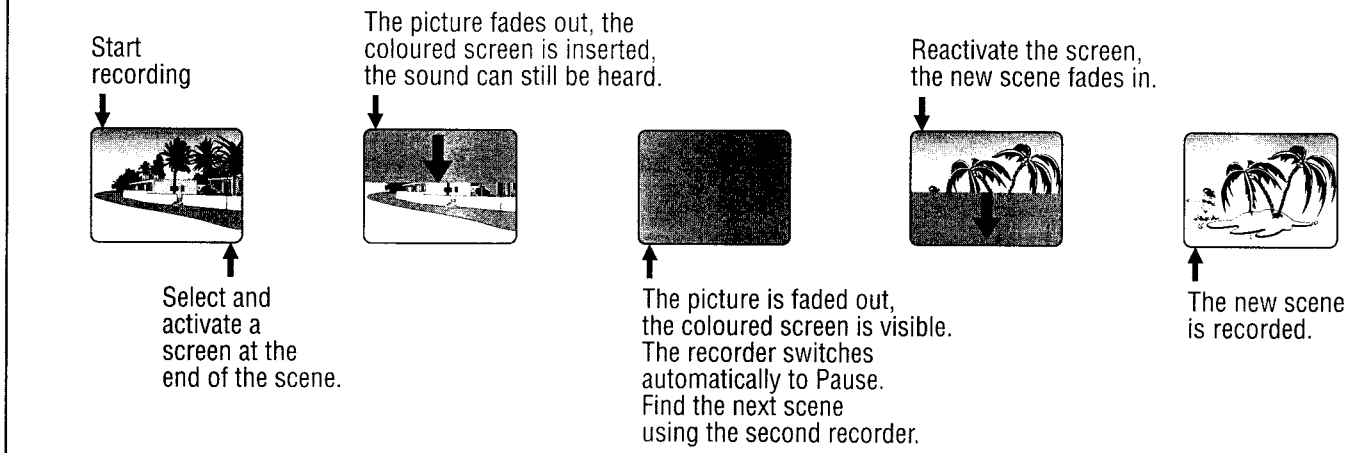
3. Fade Functions

The recorder offers you different options for fading recordings in and out.

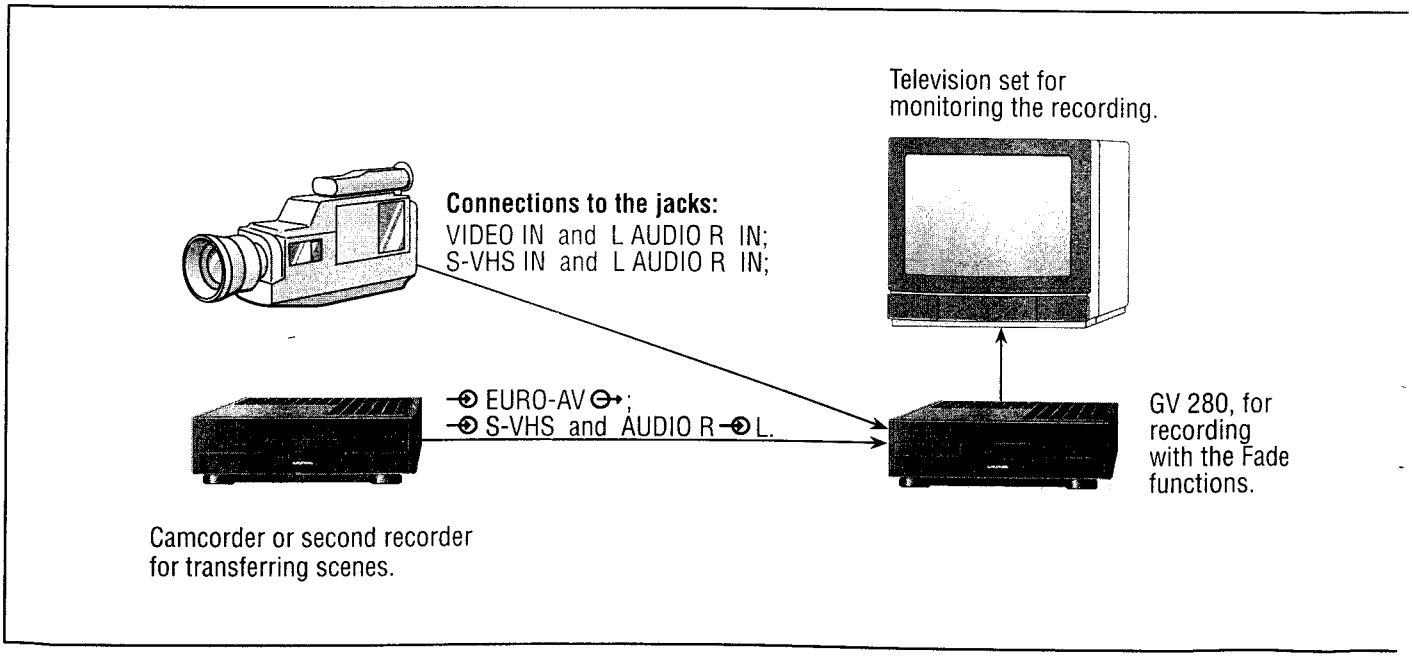
You can join scenes to other scenes or fade out the end of a scene with a coloured screen and then fade in a new scene.

Fading Scenes In and Out with a Coloured Screen

The illustration shows the progression of a recording


Start recording
The picture fades out, the coloured screen is inserted, the sound can still be heard.
Reactivate the screen, the new scene fades in.
Select and activate a screen at the end of the scene.
The picture is faded out, the coloured screen is visible. The recorder switches automatically to Pause. Find the next scene using the second recorder.
The new scene is recorded.

Connection Diagram


Television set for monitoring the recording.
Connections to the jacks:
VIDEO IN and L AUDIO R IN;
S-VHS IN and L AUDIO R IN;
EURO-AV;
S-VHS and AUDIO R L.
GV 280, for recording with the Fade functions.
Camcorder or second recorder for transferring scenes.

3. Fade Functions with a Coloured Screen

Preparation

Turn on the TV set and select the AV programme position for the video recorder.

Open the front cover of the recorder.

Insert a cassette with sufficient playing time that can be recorded on/over into the GV 280.

Insert a previously recorded cassette into the second recorder.

Open the remote control handset.

Presetting

Selecting the programme source (primary source) for the second recorder

To do this, press the AV/CV button repeatedly;

⊖ EURO AV ⊖ jack, display on recorder AV;

VIDEO IN, L AUDIO R IN jack, display on recorder CV;

S-VHS IN, L AUDIO R IN jack, (front of rec.), display on recorder CV S1;

S-VHS IN, L AUDIO R IN jack, (back of rec.), display on recorder CV S2.

Setting the fade speed

You can determine how quickly the screen is faded in. The recorder has six different speeds.

Enter any one- or two-digit TV programme with the number buttons 1 ... 0, then press the PROGRAM ▲ button.
You will see the selected TV programme on the TV screen.

Press the ⧖ button.
A green screen will fade in – in the selected speed.

You can select a fade speed with the number buttons 1 to 6:

1 = ca. 1/2 second,

2 = ca. 1 second,

3 = ca. 2 seconds,

4 = ca. 4 seconds,

5 = ca. 8 seconds,

6 = ca. 20 seconds,

Confirm the selected speed with the ⧖ button.

A green screen will fade onto the television – in the selected speed.

Repeat this setting procedure until the desired fade speed has been reached.

Setting the colour intensity of the screen

You can modify the intensity of the preset colours.
Enter any one- two-digit channel number with the number buttons 1 ... 0, then press the PROGRAM ▲ button.
You will see the selected TV programme on the TV screen.

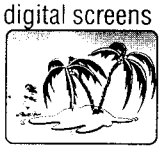
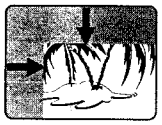
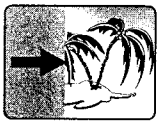
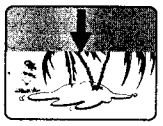
Press one of the colour buttons (white) to (blue).
A micro-picture will fade onto the TV screen – in the selected colour.

Set the colour intensity with the ◀ or ▶ button. Changes are registered on the micro-picture.

Store the setting with the OK button, or terminate with the CL button.

The types of screens

You can choose from the following screens,

this screen		with this button
analog screen		
	analog, soft	
digital screens		
	digital, soft	
	box larger	
	box smaller	
	horizontal screen	
	vertical screen	
	shutter screen	

After the screen has been selected, the display indication: FADE will appear.

3. Fade Functions with a Coloured Screen

More options – after selecting a screen

The different screen colours

You can choose from eight available colours with the colour buttons:
white, black, light blue, magenta (purple), red, green, yellow, blue.
The display indication: FADE-C will appear on the recorder.

Selecting sound for the fade function

Basic setting: the sound will be recorded until taping stops.

If you want to fade out the sound with the picture, press the button. The display indication: FADE-S will appear on the recorder.

With the button you can determine the exact time of sound fade-out, the sound will then be turned off.

Starting the fade

You can start the fade following the options shown on page 35 and on this page with the button.

After the coloured screen has faded in, the recorder will switch to recording-pause.

Example of re-recording with a coloured screen

The different options are listed in the chapter on the previous page.

Select the programme source for the second recorder/camcorder, by pressing the AV/CV button until the required programme source appears in the recorder's display.

Select the screen with the corresponding button.
Select the screen colour with the corresponding colour button.

Start playback on the second recorder/camera recorder when you have located the desired scene. Press the button longer to start recording on the GV 280.

When the scene ends:
Activate the screen with the button.

The scene wil fade out, the selected coloured screen will fade in and the recorder will switch automatically to recording-pause.

Terminate the fade function with the CL button.

Locate the next scene to be recorded and switch the camera recorder to playback/pause.
Select the screen with the corresponding button.
Select the screen colour with the corresponding colour button.
Press the button.
The selected colour will appear on the picture screen.
Start playback on the camera recorder.
Activate the screen withg the button. The recorder will automatically select record, the picture will be faded in and recorded.
You can repeat this procedure as desired.

With the button you can "freeze" a screen during the fading process, the recording will "go" on. If you press the button again, the fade process will continue.

Press the button to stop recording.

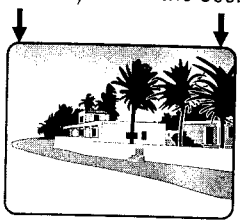
3. Fade Functions

Fading Scenes In and Out, with Picture-to-Picture Fading

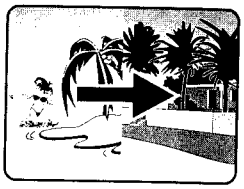
The illustration depicts the progression of a recording

First scene, from camera 1. (Main source)

Select and activate a screen at the end of the scene.



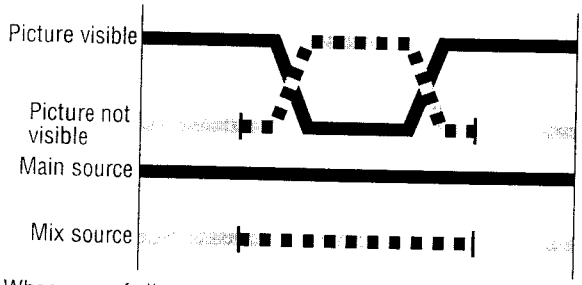
The first scene (main source) fades out and the second scene (mix source) will immediately fade in.



Second scene, from camera 2. (mix source)

Progression of the screen functions

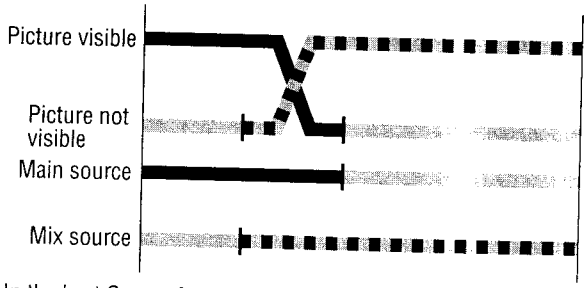
Cross-Fading



When cross-fading scenes, the main source signal (camera 1) must be continuously operational.

This screen is activated with the button.

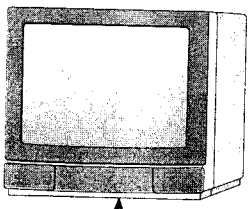
Last Screen



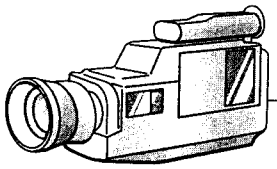
In the Last Screen function, the main source signal (camera 1) ends after the last screen is completed.

This screen is activated with the button.

Connection Diagram Example with two cameras

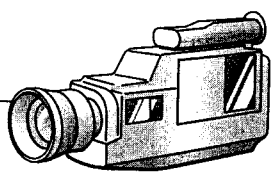


Television set for monitoring the recording.



Camera 1 (main source): checking the picture on the camera monitor.

Connections to the jacks:
→ EURO-AV ←;
→ S-VHS and AUDIO R → L;
VIDEO IN and L AUDIO R IN;
S-VHS IN and L AUDIO R IN.



Camera 2 (mix source): checking the picture on the camera monitor.

3. Fade Functions with Picture-to-Picture Fading

Preparation

Turn on the TV set and select the AV programme position for the video recorder.

Open the front cover of the recorder.

Insert a cassette with sufficient playing time that can be recorded on/over into the GV 280.

Connect the video cameras to the recorder according to the connection diagram.

Select the programme source/input jack for camera 1 (primary source)

To do this, press the [AV/CV] button repeatedly;

⊖ EURO AV ⊖ jack, display on recorder AV;

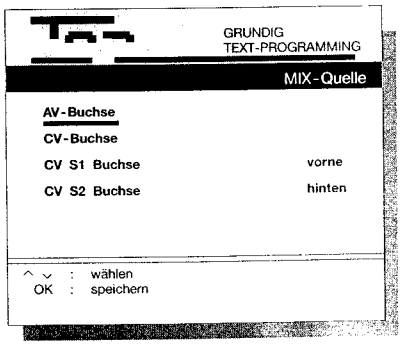
VIDEO IN, L AUDIO R IN jack, display on recorder CV;

S-VHS IN, L AUDIO R IN jack, (front of rec.), display on recorder CV S1;

S-VHS IN, L AUDIO R IN, (back of rec.), display on recorder CV S2;

Select programme source/input jack for camera 2 (mix source)

Press the [i⊣] button.
The "Mix Quelle" (Mix Source) menu will appear on the screen, the selected jack is marked.



Select the necessary jack with the [▼] or [▲] buttons, the indicator for the jack is marked (underlined in blue).

Activate the necessary jack by pressing the [OK] button. The jack indication will become green, the menu will be automatically turned off.

To fade over to the mix source, a unit must be connected to the corresponding jack of the recorder.

Setting the fade speed

You can determine how quickly the screen is faded in. The recorder has six different speeds.

Enter any one- or two-digit TV programme with the number buttons [1] ... [0], then press the PROGRAM [▲] button.
You will see the selected TV programme on the TV screen.

Press the [X] button. A green screen will fade in – at the selected speed.

You can select a fade speed with the number buttons [1] to [6]:

[1] = ca. 1/2 second,

[2] = ca. 1 second,

[3] = ca. 2 seconds,

[4] = ca. 4 seconds,

[5] = ca. 8 seconds,

[6] = ca. 20 seconds,

Confirm the selected speed with the [X] button.

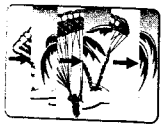
A green screen will fade onto the television – at the selected speed.

Repeat this setting procedure until the desired fade speed has been reached.

3. Fade Functions with Picture-to-Picture Fading

The types of screens

You can choose from the following screens,

this screen		with this button
analog screen		
	analog, soft	
digital screens		
	digital, soft	
	box larger	
	box smaller	
	horizontal screen	
	vertical screen	
	shutter screen	

After the screen has been selected, the display indication: FADE will appear.

More options – after selecting the screen

Selecting sound for the fade function

Basic setting: the sound from programme source 1 (primary source) will continue to be recorded. If you want to fade in the sound from program source 2 (mix source) alonge with the picture, press the [◄►] button.

With the [◄\►] button you can determine the exact time of sound fade-over onto the mix source.

Other effects

You can select additional effects for the mix source, for example, the paint effect (with the [PAINT] button) or the inverse effect (with the [i] buttton).

Exchanging programme source 1 (primary source) for program source 2 (mix source)

To do this, press the [⇄] button.

Starting the fade

You can start the fade according to the options on page 38 and on this page with the [▮→▮] button.

When the picture signal from programme source 1 (= the primary source) has ended after re-recording, the fading has to be started with the [▮→▮] button.

Example of recording with picture-to-picture fading

The different options are listed in the chapter on the previous page.

Select the programme sources for camera 1 (primary source) and camera 2 (mix source).

Switch both cameras to record.

Select the desired picture fading with the respective fading button. Select options.

Press the [●] button longer to start recording on the GV 280.

Locate the scene using the camera monitor.

Using the selected screen and the selected options, you can fade recordings from camera 1 (primary source) and camera 2 (mix source). To do this, activate the screen at the desired scene with the [▮→▮] button.

The first scene will fade out, the new one will fade in.

You can repeat this procedure according to your preference – with the same or with another screen.

With the [▮▮] button you can "freeze" the screen during the fading process, the recording "goes" on. If you press the button again the fade process will continue.

Press the [⏻] button to stop recording.

Following this example, you can, of course, join scenes that come from two video recorders.

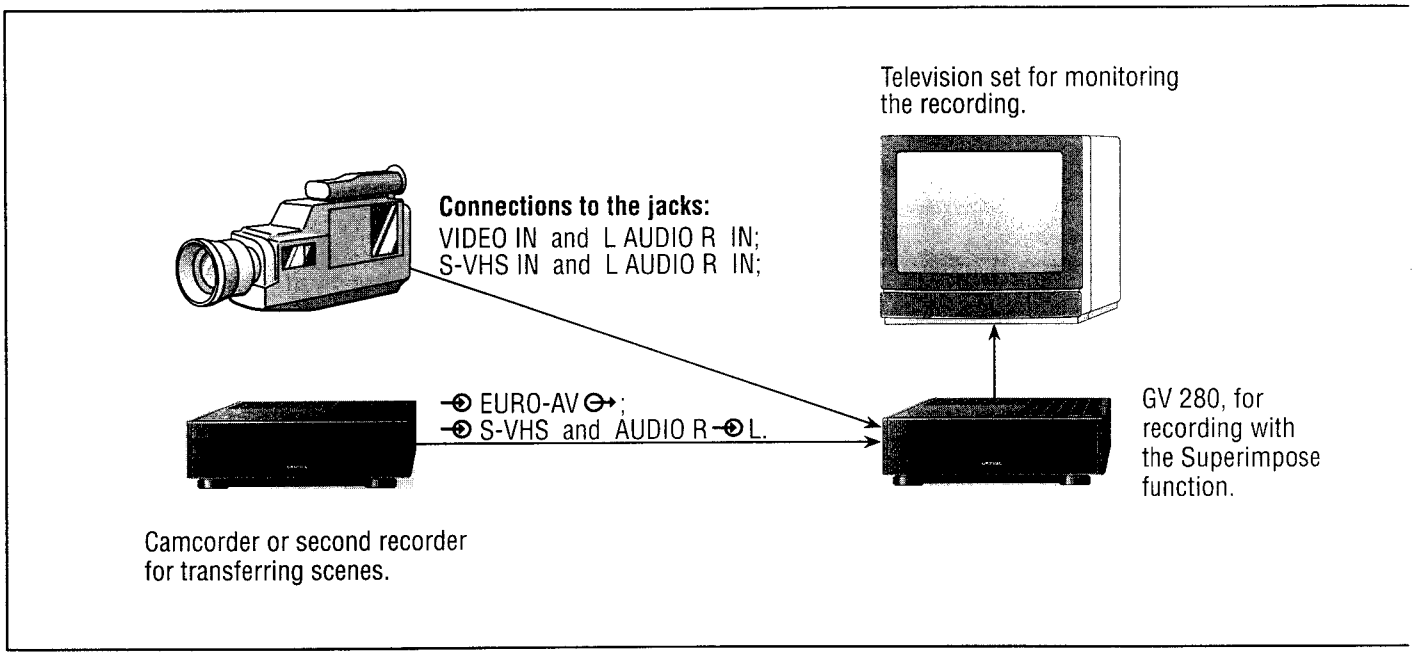
4. Superimpose Functions

Superimpose Function

You can modify any picture signal – from a TV programme, a second recorder or a camcorder – and record it with your VCR or re-record it on another recorder.

Connection diagram

Open the front cover of the recorder.


Television set for monitoring the recording.
Connections to the jacks:
VIDEO IN and L AUDIO R IN;
S-VHS IN and L AUDIO R IN;
EURO-AV;
S-VHS and AUDIO R L.
GV 280, for recording with the Superimpose function.
Camcorder or second recorder for transferring scenes.

Preparation

Turn on the TV set and select the AV programme position for the video recorder.

Selecting the programme source

Enter any one- or two-digit TV programme with the number buttons [1] ... [0] and then press the PROGRAM [▲] button,
or

select the picture/sound signal from an external source (for example, a second VCR or a camcorder) by repeatedly pressing the [AV/CV] button until the necessary display appears on the recorder.

EURO AV jack, display on recorder AV;

VIDEO IN, L AUDIO R IN jack, display on recorder CV;

S-VHS IN, L AUDIO R IN, (front of rec.), display on recorder CVS1;

S-VHS IN, L AUDIO R IN, (back of rec.), display on recorder CVS2.

4. Superimpose Functions

Selecting the superimpose function

With the [ ] – button lighter parts of the picture will be frozen in a mask. The darker parts of the mask will be transparent;
or

with the [ ] – button, the darker parts of the picture will be frozen in a mask. The light blue parts of the mask will be transparent.
Display on recorder: IMP
and a number between 0 and 100.

The number indicates the mix ratio between the mask and the playing scene.

Display 0: 100 % of the picture parts are the playing scene;

Display 100: 100 % of the picture parts are the mask.

After the function has been selected the current scene is "frozen". You will see a combined picture with the playing scene and the frozen picture mask.

Changing the picture signal

You can change the picture composition with the [◀] and [▶] buttons.
You can fade "directly" from the frozen picture to the playing scene.

Press the [OK] button to store the set value.

Superimpose function with colour

You can also apply colour to the frozen picture.
Select the desired colour with the colour buttons [ ] (white) to [ ] (blue) when in the superimpose function.
The frozen picture parts will be coloured.
With the [◀] and [▶] buttons you can cross-blend "directly" between the frozen colour picture and the playing scene.
You can modify the colour itensity (see page 35).

The colour can be switched off again by pressing the [ ] button or the [ ] button.

Other effects

You can select additional effects along with the superimpose function, for example, the paint effect (with the [PAINT] button) or the inverse effect (with the [ ] button).

By pressing the [STOP] button the selected colour or effect will register in the light or dark parts of the playing picture.
If you press the [STOP] button again, the playing scene will be frozen as a mask which can be modified.

Superimpose with demo

If a picture has been stored with [MEMO], [STOP], [ ], [ ], [ ], [ ], this picture will be available as a mask for the superimpose function.
To call up the picture, press the [DEMO] button and then the [ ] or [ ] button.

Recording the superimpose function

Read the chapter on page 44 for recording instructions.

Ending the superimpose function

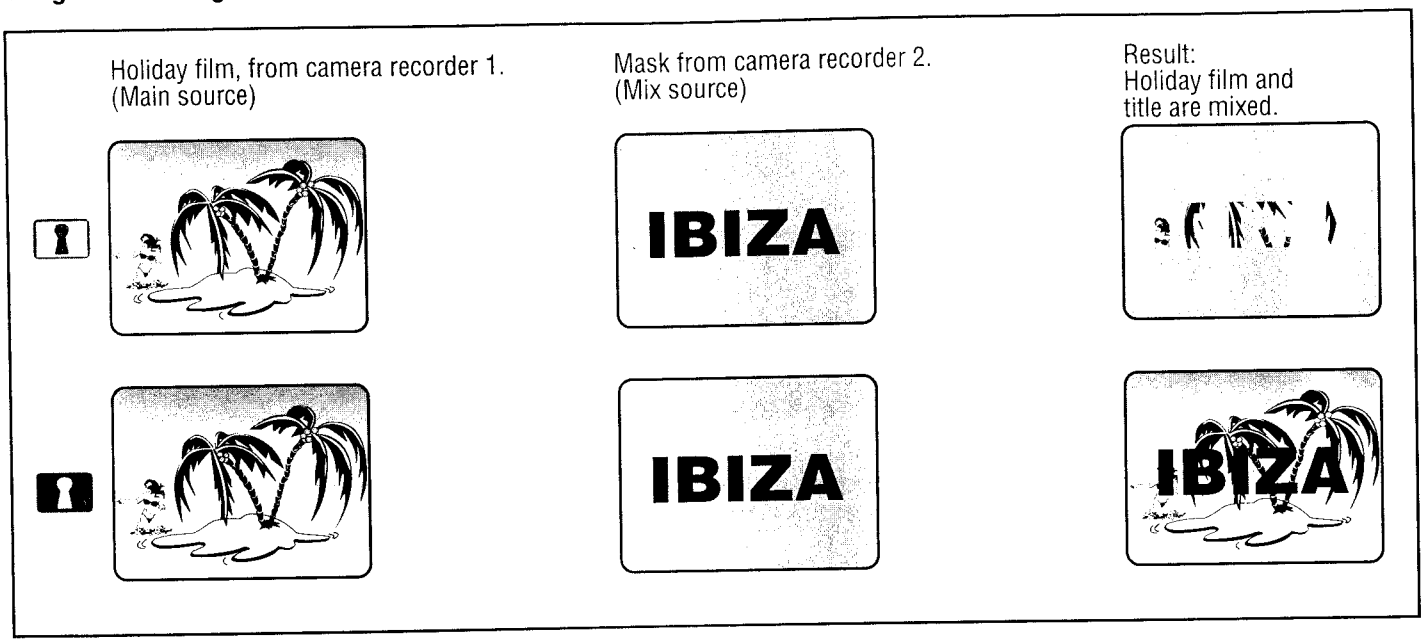
Press the [CL] button.

4. Superimpose Functions

Genlock Impose Function

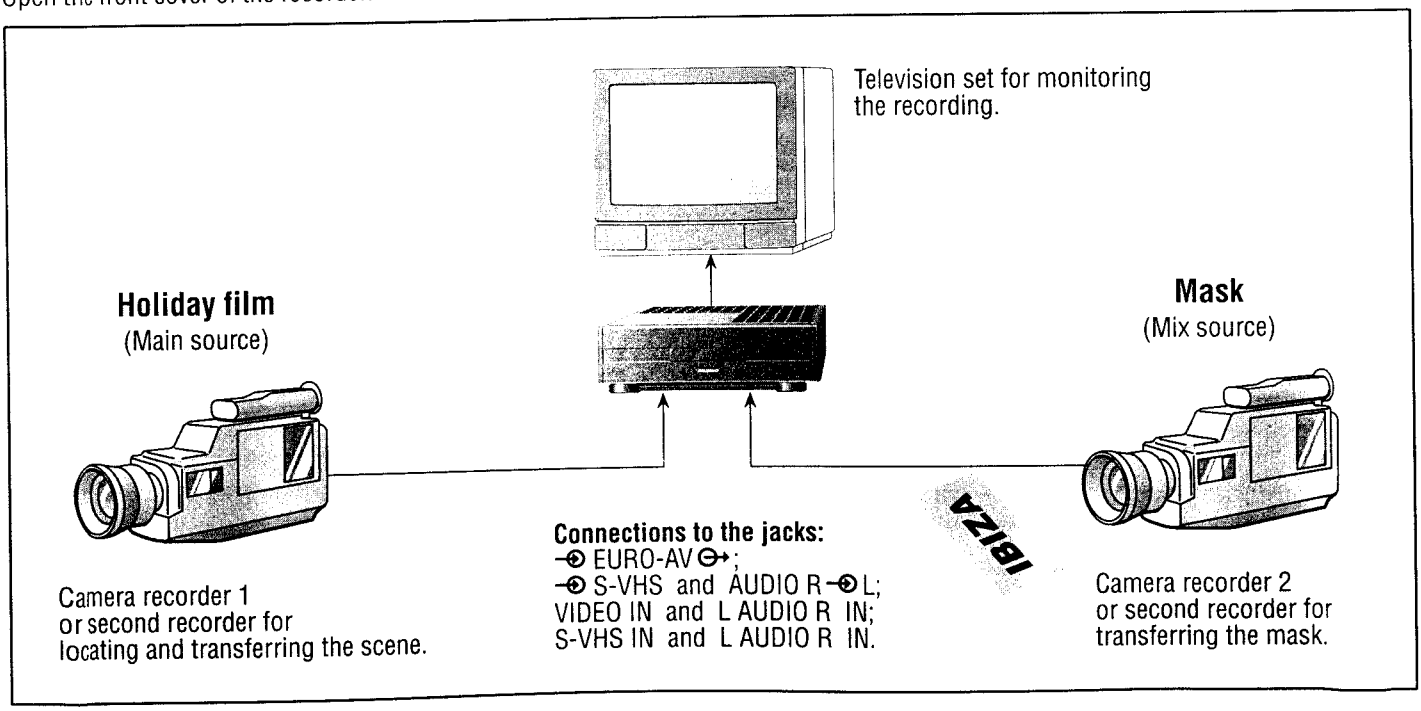
You can superimpose any two picture signals of a primary and mix source (e.g. two camera recorders), and record them on your recorder or re-record them onto a second recorder.

Progression Diagram



Connection Diagram

Open the front cover of the recorder.



Preparation

Turn on the TV set and select the AV programme position for the video recorder.

Selecting a programme source ...

A signal source that deviates from the 625-line norm (for example a 624-line norm PAL signal) has to be connected as a "Mix Quelle" (Mix Source).
A 625-line PAL signal always has to be used for the primary source (for example, a VCR or camcorder).

... for the first picture/sound signal (primary source)

for example, enter a one- or two- digit TV programme with the number buttons [1] ... [0] and then press the PROGRAM [▲] button;
or

Select a picture/sound signal from an external source (for example, a second VCR or a camcorder),

by pressing the [AV/CV] button repeatedly until the necessary display appears on the recorder:
⊖ EURO AV ⊖ jack, display on recorder AV;

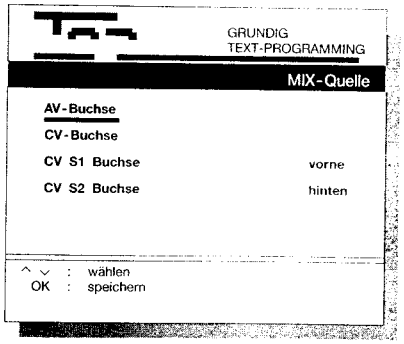
VIDEO IN, L AUDIO R IN jack, display on recorder CV;

S-VHS IN, L AUDIO R IN jack, (front of rec.), display on recorder CV S1;

S-VHS IN, L AUDIO R IN jack, (back of rec.), display on recorder CV S2.

... for the second picture/sound signal (mix source)

Press the [i-⊟] button.
The menu "Mix-Quelle" (Mix Source) will appear on the screen, the selected jack is marked.



Select the necessary jack (Buchse) with the [▼] or [▲] button, the indication is marked (underlined in blue).

Activate the necessary jack by pressing the [OK] button, the jack indication will become green and the menu will be automatically switched off.

To fade in the mask of the mix source, a unit must be connected to the corresponding socket.

Selecting the genlock impose function

Press the [!] button.
The lighter parts of the picture will be depicted as a mask. The dark parts of the picture will appear transparent.
or

Press the [!!] button.
The dark parts of the picture from the mix source will be depicted as a mask. The light parts of the picture will appear transparent.

Display on recorder: GEN
and a number between 0 and 100.

The number indicates the ratio between the mask and the playing scene.

Display 0: 100 % of the picture parts are the playing scene;

Display 100: 100 % of the picture parts are the mask.

You will see the playing scene from the camera recorder 1 (primary source) as well as the playing scene of the camera recorder 2 (mix source).

Changing the picture signal

With the [◀] and [▶] buttons you can cross-blend "directly" between the mix and primary sources.
You can store the set value by pressing the [OK] button.

Genlock impose function with colour

Select the desired colour with the colour buttons [ ] (white) to [ ] (blue) when in the genlock impose function.
The parts of the frozen picture will be coloured.

With the [◀] and [▶] buttons you can cross-blend "directly" between the primary picture source and the second colour picture source.

The colour can be switched off again by pressing the [!] or [!!] buttons.

With the [◀▶] button you can determine the exact time of sound fade-over onto the mix source.

Other effects

You can select additional effects along with the genlock impose function, for example the paint effect (with the [PAINT] button) or the inverse effect (with the [!] button).
You can freeze the depicted mask (Mix Source) by pressing the [STOP] button. As described above, the mask can be modified. If you press the [STOP] button again, this status is ended.

Exchanging the picture sources

Both picture sources can be exchanged by pressing the [⊟] button. This might be necessary, for example, if a 624-line picture source was used as the primary source.

Ending the genlock impose function

Press the [CL] button.

4. Superimpose Functions

Recording the Superimpose/Genlock Impose Function – with your Recorder

Preparation

Turn on the television set.

Select the AV programme position for the recorder on the television set (serves as a monitor).

Open the front cover of the recorder.

Insert a cassette with sufficient playing time that can be recorded on/over.

Recording

Select the desired TV programme with the number buttons [1] ... [0] and then press the PROGRAM [▲] button; or select another programme source (for example a satellite receiver, camcorder, etc.) with the corresponding button.

> There must always be a picture/sound signal at the selected programme position.

Select the Digital Superimpose or Genlock Impose functions, following the instructions on pages 40 to 43.

Start recording by pressing the [●] button longer.
The picture can still be altered during recording.

Stop recording by pressing the [⏻] button.

Recording the Superimpose and Genlock Impose Function – with another Recorder

Preparation

Turn on the television set.

Select the AV programme position for video playback (serves as a control monitor).

Open the front cover of the recorder.

Connect the second recorder to the ⊖ EURO-AV ⊖ jack.

Insert a cassette that can be recorded on/over into the second recorder.

Recording

Press the number buttons [8] [5] [4] [7] on your recorder consecutively and then press the [OK] button.

Insert a previously recorded cassette into your recorder and start playback by pressing the [▶] button, or
select the desired TV programme with the number buttons [1] ... [0] and then press the PROGRAM [▲] button.

Select the superimpose or genlock impose function, as described on pages 40 to 43.

Start recording on the second recorder.
The picture can still be altered during recording.

Stop recording on the second recorder.

After re-recording, press the number buttons [8] [5] [4] [6] consecutively and then press the [OK] button.

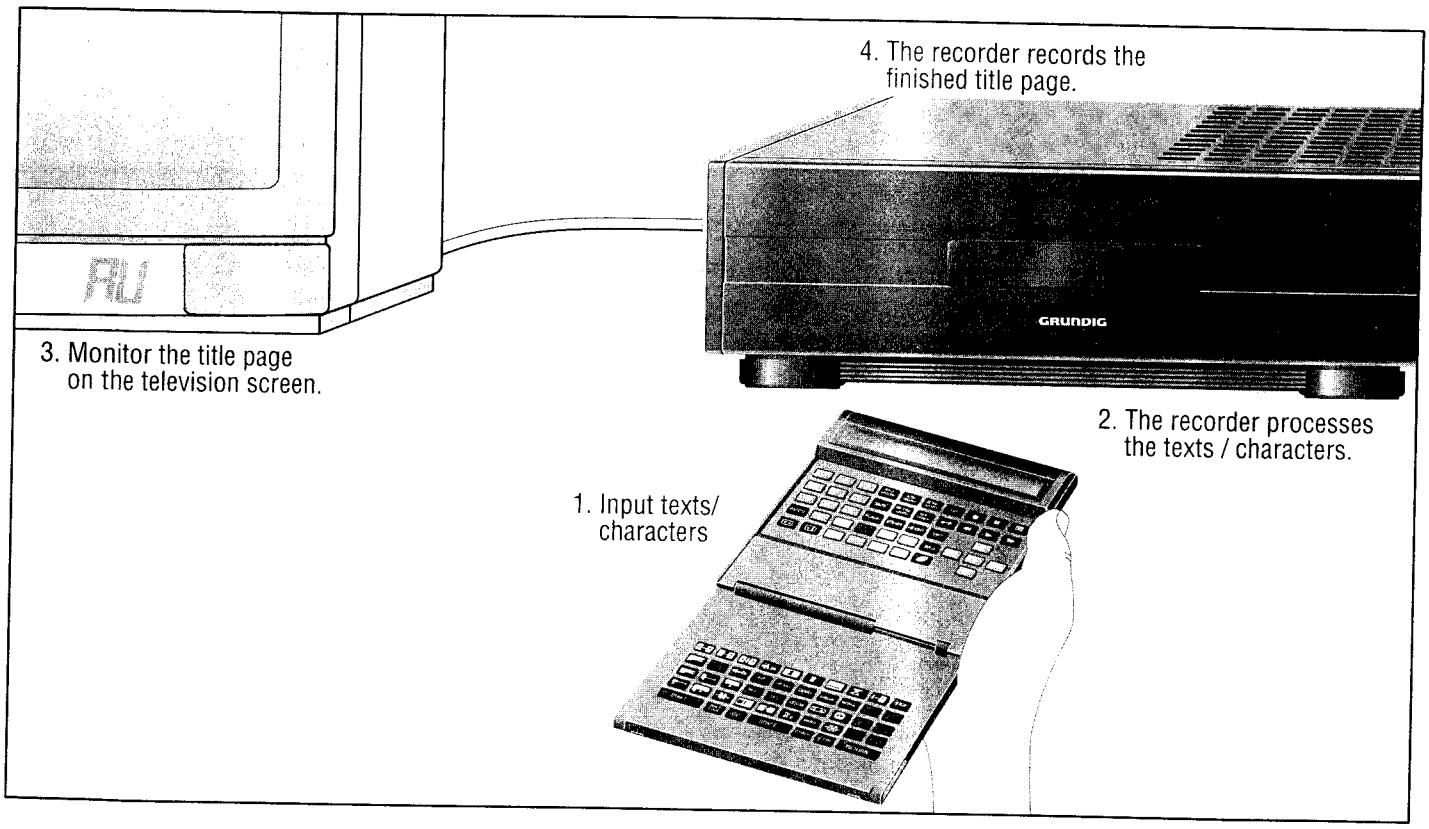
5. Composing Title Pages

You can compose "title pages" with this recorder and the remote control handset.

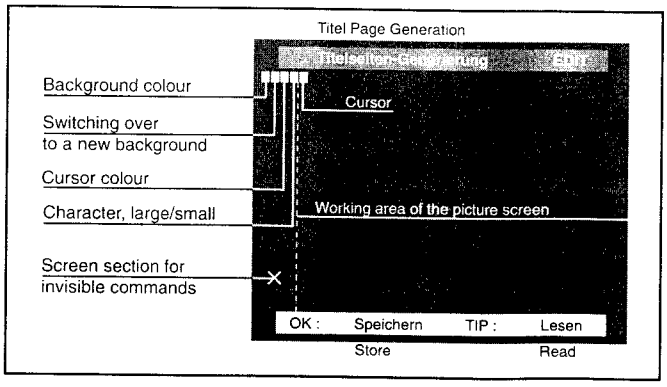
They can be used, for example, for processing vacation movies that were taped with a camcorder.

You can compose, store and, at the desired position, record three "title pages" on a "vacation tape".

Progression of Title Composition


4. The recorder records the finished title page.
GRUNDIG
3. Monitor the title page on the television screen.
2. The recorder processes the texts / characters.
1. Input texts/ characters

Tips for "Composing Title Pages"



A "title page" can consist of max. 828 visible picture points.

It can be assembled as 36 picture points per line and 23 lines.

The first three cursor symbols on the left-hand side of the picture are not visible and are used for presetting the cursor in the colour of the basic functions, large/small and the background colour of the title page.

Therefore, the cursor always begins to write at the same position, set at the width of these three symbols.

5. Composing Title Pages

If the the GRAPH function (GPH lights up in the display on the remote control handset) is entered as the first function in the top left at the beginning of the line, it is not necessary to enter any more blank spaces.

If, however, at the beginning of the line, additional functions
CON GRAPH = Block graphics
SEPAR GRAPH = Point graphics
RELEASE GRAPH = Repeating of characters is removed
FLASH = letters/characters blink
are selected along with the GRAPH function, another cursor position will be occupied with a blank space. This means that there will be a space the width of a cursor at the beginning of the line or a gap after a word or letters.

If you switch from letters to graphics entry, a space will be inserted for the graphics priority. If you position the cursor at this space, you will switch back to script entry.

This switching process can also be reverted to the previous mode, and, as desired, can also transform script into graphics characters or graphics into script characters.

This means that when special characters are used, one or several blank spaces are created.

If words or graphics symbols are written in different colours, or if you change the colour of a line or the background more than once, entire words or graphics symbols could become invisible if the colour is the same.

If you are in graphics entry mode and the colour of the cursor changes in the graphics line, a colour command symbol will be set as a space.

This space cannot be written over or erased with the [CL] button. It it possible, however, to write over it in another text colour by setting a new colour command symbol.

With the [S-TYP] button and the [ ] button (green), you can erase the entire line to the right of the cursor. This is necessary to avoid undesired effects which could result from possibly existing colour command symbols.

If a frame is to be made, e.g. in point or line graphics, make sure to follow this sequence!

The graphics page to be created must be switched over into graphics mode with the [GRAPH] button, before editing begins.

If this is not carried out in the sequence described below, the cursor will be moved to the lower edge, and moved a space, after each new line is entered.

Example: [GRAPH] button, [ ] button (green) for the background colour, the [SHIFT] button and end with the [BACK GROUND].

The background will now appear in green and the cursor begins in the graphics mode.

To chose another background colour, the first step is to begin with the [GRAPH] button.

If the user writes in the top third of the screen first with text lines and then with graphics symbols, the rest of the page can be worked on in the graphics mode, after switching over to graphics mode (as described in the above paragraph).

If you want to put a border around individual letters, the right side of the border should only be created once the desired script, written in shape and colour, has been created in the graphics box.

5. Composing Title Pages

Example for "Composing Title Pages"

Preparation

Turn on the television set.

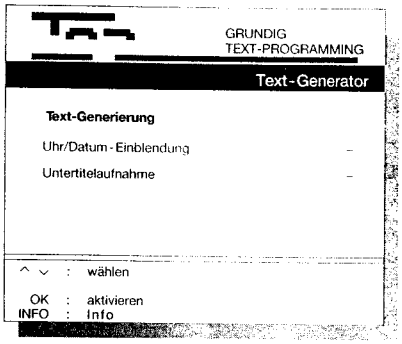
Select the AV programme position for video playback on the televison set (serves as a control monitor).

Calling up the text page

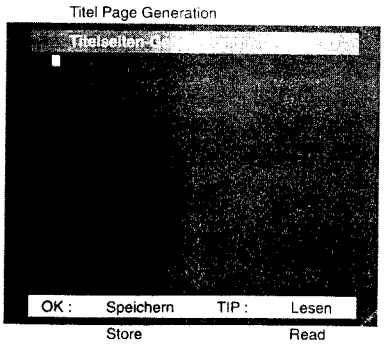
Call up the "Info" menu with the INFO button.

Select the "Sonderfunktionen" (Special Functions) line from the "Info" menu with the number button 4.

Select the "Text-Generator" line from the "Sonderfunktionen" menu with the number button 1.
The "Text-Generator" menu will appear and the "Text-Generierung" (Text Generation) is marked in blue.



Activate "Text-Generierung" with the OK button.
The page "Titelseiten-Generierung" (Title Page Generation) will appear, "EDIT" on the top Info line indicates that you can now create title pages.
The cursor will be positioned in the upper left-hand corner of the screen.



Open the remote control handset.
Level 1 is now turned off.

Moving the cursor

You can move the cursor to the desired position on the screen with the ▲, ▼, ◀ and ▶ buttons.

Selecting the colour of the background ...
... for a line

Press the colour button
- (black),
- (red)
- (green)
- (yellow)
- (blue)
- (magenta)
- (light blue)
- (white)

then press the BACK GROUND button.
The first line will appear in the desired colour.
The cursor will automatically appear in a contrasting colour, or

... for the entire page (from cursor position down)

Press one of the above-mentioned colour buttons, then press the SHIFT button and then press the BACK GROUND button.
The entire page will appear in the selected colour.
The cursor will automatically appear in a contrasting colour.

If you want to change the colour again, repeat the above entries.

The "new" colour will appear for a line or, from the cursor position down, for the entire page. The "old" background will be covered with the "new" one.
If no colour has been chosen the background will be black and the text and graphics will be white.

Selecting the colour of the script/characters

Select the colour of the script/characters with one of the above-listed colour buttons.

Composing Title Pages

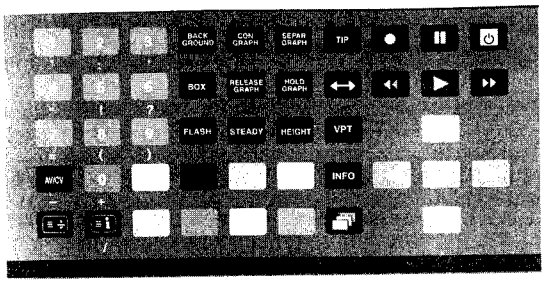
Entering texts

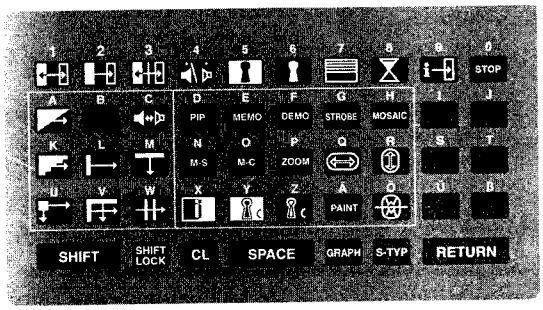
With the ▲, ▼, ◀ and ▶ buttons you can set the position of the cursor on the screen.

Enter your text with the letter and number buttons on the remote control handset.

The illustration shows the buttons with their entry options.

For capital letters, you have to press the SHIFT button first.





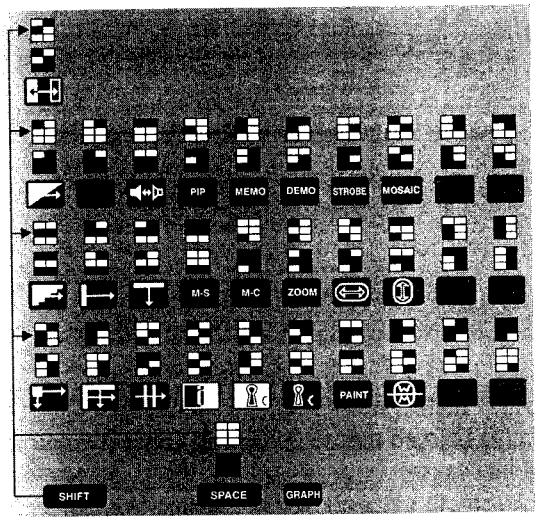
Entering graphics

Switch the buttons on the remote control handset over to graphics entry with the GRAPH button.
The indication GPH will remain in the display of the remote control handset while you are in the graphics mode.

The illustration shows the buttons with their entry options for graphic symbols. You have to press the SHIFT button to access the symbols in the top row.

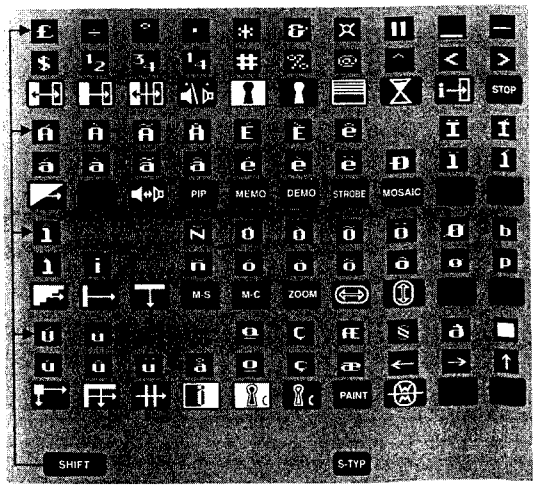
> After a graphic symbol has been entered, the cursor does not automatically go to the next position.
> Move the cursor to the desired position with the ▶, ◀, ▲ or ▼ buttons.

To switch back to text entry press the GRAPH button again.



Entering special characters

To switch the buttons on the remote control handset over to the special characters (one character at a time), press the S-TYP button.
This will light up in the display of the remote control handset: S-t.
S-t will disappear after every entry.
The illustration shows the buttons with their functions for special characters. You have to press the SHIFT button to access the characters in the top row.



You will find additional functions on the next page.

5. Composing Title Pages

Additional functions for entering text, graphics and special characters

Button	Function
S-TYP and (black)	erases all entries on an editing page
RETURN	new, next line
SPACE	a blank space
S-TYP and (green)	clears a complete line from the cursor position on
HEIGHT	doubles the height of the letters/characters in a line, press the button again to end the function
SHIFT	capitalizes the next letter, next graphic symbol is negative
SHIFT LOCK	capitalizes all following letters, all following graphic symbols negative
CL	clears the letter/character that the cursor is on
FLASH	letters/graphic characters "blink" from the cursor position on
STEADY	ends the "FLASH" function

Additional functions for entering letters

Button	Function for text entries
S-TYP and (light blue)	clears a complete line, text moves up
S-TYP and (yellow)	inserts a line, the text is moved down
S-TYP and (white)	cursor skips to the first line
S-TYP and (red)	cursor skips to the beginning of the line
S-TYP and (magenta)	cursor skips to the last line
S-TYP and (blue)	cursor skips to the end of the line

Additionalfunctions for entering graphics characters

Button	Function for graphics entries
HOLD GRAPH	repeats the character last entered
RELEASE GRAPH	ends the "HOLD GRAPH" function
SEPAR GRAPH	switches to "point graphics"
CON GRAPH	switches to "block graphics"

Saving texts/graphics

Press the OK button, then select the memory position for the page by pressing the number buttons 1 ... 3.
The selected memory page will be shown in the "top" Info line.

> By pressing the number button 0, you can switch back to the editing page, the page will not be saved.

Save the title page with the OK button.
The title page is filed in the selected memory position.
The "Titelseiten-Generierung" (Title Page Generation) page will appear, ready for more entries.

Calling up a stored title page

Press the TIP button, then call up the desired title page with the number buttons 1 ... 3.
The page will appear and the page number fade into the "top" Info line.

Press the TIP button again and the selected page will be "loaded" onto the editing page, and can then be modified. Then store the page as described in the preceding chapter.

Recording the title page on the tape

Exit the editing page by pressing the INFO button twice.

Insert a cassette.
The recorder will automatically determine if an S-VHS or VHS cassette is being used.
If you want to record VHS on an S-VHS cassette, press the S-VHS button (S VHS will disappear from the display).

Locate the place on the tape where the title page is going to be inserted while in playback mode.

At the place on the tape, press the ⏸ button (playback-pause), then press the ● button longer (recording-pause).

Call up the stored title page by pressing the number buttons 1, 2 or 3 and then press the TIP button.
The title page will appear on the TV screen.

Start recording by pressing the ● button.
The title page will be recorded on the tape, the "old" recording will be erased.

By pressing the TIP button the recorder will switch to recording-pause and the next title pages can be called up.

Press the ⏻ button to stop recording.

5. Composing Title Pages

Changing a stored title.page

Call up the "Info" menu with the [INFO] button.

Select the "Sonderfunktionen" (Special Functions) line from the "Info" menu with the number button [4].

Select the "Text-Generator" line from the "Sonderfunktionen" menu with the number button [1].
The "Text-Generator" menu will appear, the "Text-Generierung" (Text Generation) line is marked in blue.

Activate the function with the [OK] button.
The "Titelseiten-Generierung" (Title Page Generation) page will appear.

Press the [TIP] button, then call up the title page with the appropriate number buttons [1] ... [3].
The page will appear, the page number is faded into the top Info line, to the right.

If you press the [TIP] button again, the selected title page will load onto the editing page and can then be modified.

After the title page has been modified, press the [OK] button to store it.

Select a new memory position (or an old one, if you want to write over it) by pressing the number buttons [1] ... [3].
The number of the selected title page will fade into the top Info line, to the right.

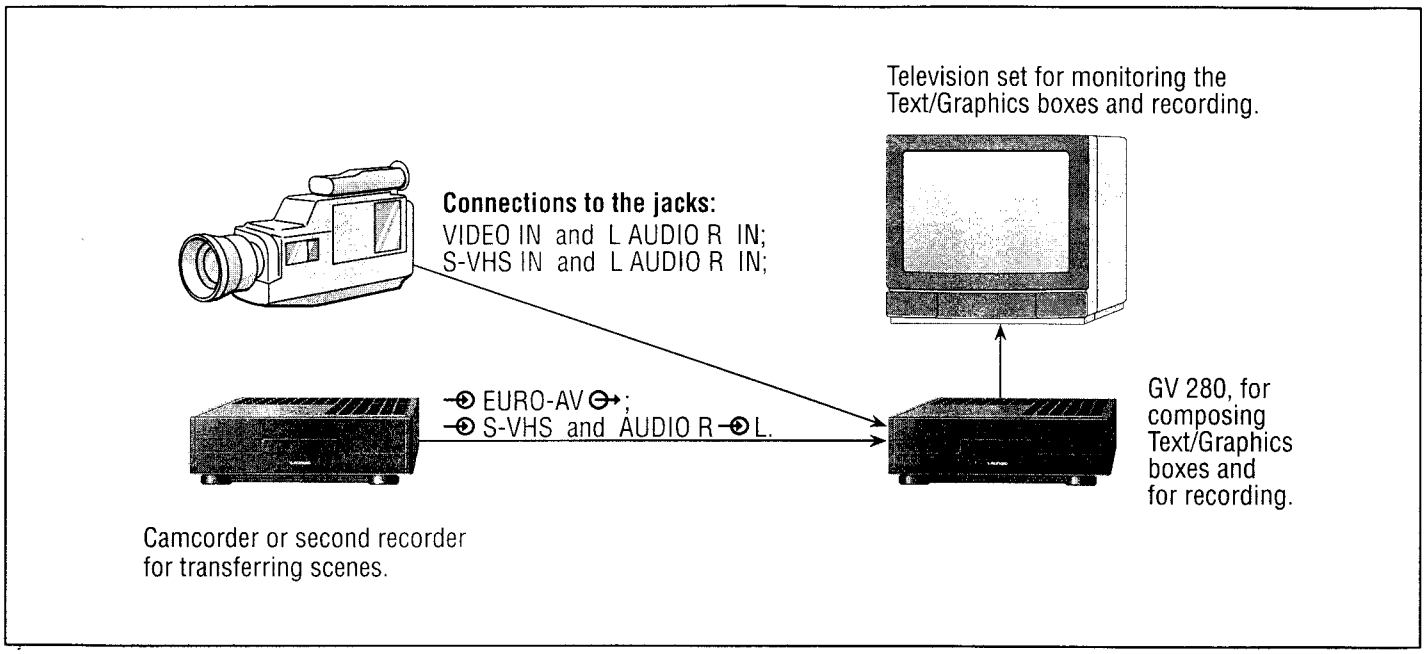
Store the title page with the [OK] button.
The modified title page is filed in the selected memory position.
The "Titelseiten-Generierung" (Title Page Generation) page will appear, ready for more entries.

6. Composing Text/Graphics Boxes

You can add texts and graphics to already existing recordings – for example a holiday movie. Your holiday movie scenes will not be erased.

The holiday movie is recorded with your recorder from a second recorder or a camcorder. You can compose the text/graphics boxes with the remote control handset and this recorder.

Both signals will then be re-recorded together.


Television set for monitoring the Text/Graphics boxes and recording.
Connections to the jacks:
VIDEO IN and L AUDIO R IN;
S-VHS IN and L AUDIO R IN;
⊖ EURO-AV ⊖;
⊖ S-VHS and AUDIO R ⊖ L.
GV 280, for composing Text/Graphics boxes and for recording.
Camcorder or second recorder for transferring scenes.

Connecting

Connect a second VHS video recorder to the ⊖ EURO-AV ⊖ jack or connect a VHS camcorder to the VIDEO IN and AUDIO IN jacks (on the back of the rec.).

Open the front cover of the recorder.

Connect an S-VHS video recorder or an S-VHS camcorder to the S-VHS IN and AUDIO IN jacks (on the front of the rec.).

Preparation

Insert a blank cassette into your recorder (GV 280).
Insert the previously recorded cassette (onto which the text/graphics boxes are to be taped) into the second recorder or camcorder.

Start playback on the second recorder or camcorder.

Selecting the programm source

To do this, press the AV/CV button repeatedly;

⊖ EURO AV ⊖ jack, display on recorder AV;

VIDEO IN. L AUDIO R IN jack, display on recorder CV;

S-VHS IN. L AUDIO R IN jack, (front of rec.) display on recorder CV S1;

S-VHS IN. L AUDIO R IN jack, (back of rec.) display on recorder CV S2.

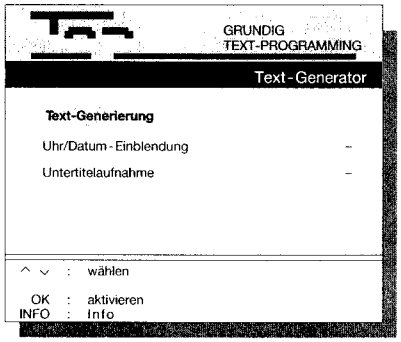
6. Composing Text/Graphics Boxes

Example of Composing Text/Graphics Boxes

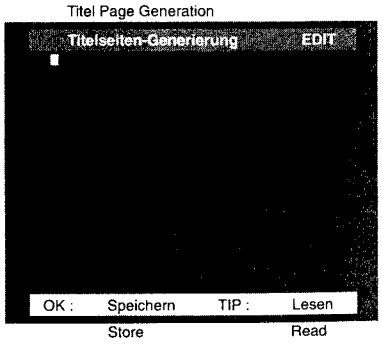
Call up the "Info" menu with the INFO button.

Select the "Sonderfunktionen" (Special Functions) line from the "Info" menu with the number button 4.

Select the "Text-Generator" line from the "Sonderfunktionen" menu with the number button 3.
The "Text-Generator" menu will appear, the "Text-Generierung" (Text Generation) is marked blue.



Activate the "Text-Generierung" (Text Generation) line with the OK button.
The "Titelseiten-Generierung" (Title Page Generation) page will appear, "EDIT" in the top Info line indicates that text/graphics boxes can be created.
The cursor is positioned in the upper left-hand corner of the screen.



Open the remote control handset.
Level 1 is now turned off.

Press the BOX button.
The picture from the second recorder or camcorder will also appear on the televison screen.

Selecting the colour of the background ...
... for a line

Press the colour button
- (black)
- (red)
- (green)
- (yellow)
- (blue)
- (magenta)
- (light blue)
- (white)

then press the BACK GROUND button.
This first line will turn the selected colour.
The cursor will automatically become a contrasting colour.
or,

... for the entire text/graphics box (from the cursor position down)

Press one of the above-listed colour buttons, then press the SHIFT button and then the BACK GROUND button.
The entire text/graphic box will turn the selected colour.
The cursor will automatically become a contrasting colour.

To change the colour again, repeat these entries.
The "new" colour will appear for a line or, starting at the cursor position, for the entire box.
The "old" background will be covered by the "new" background.
If no colour is chosen, the background will be black and the texts and graphics will be white.

Selecting the colour of the letters/characters

Select the colour of the letters/characters with one of the above-listed colour buttons.
The cursor will appear in the selected colour.

6. Composing Text/Graphics Boxes

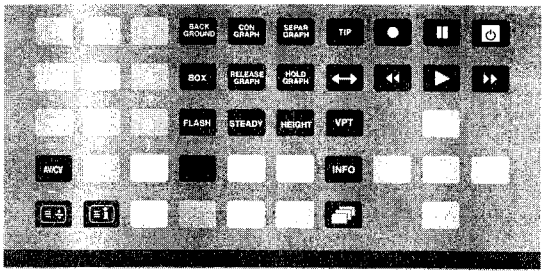
Entering texts

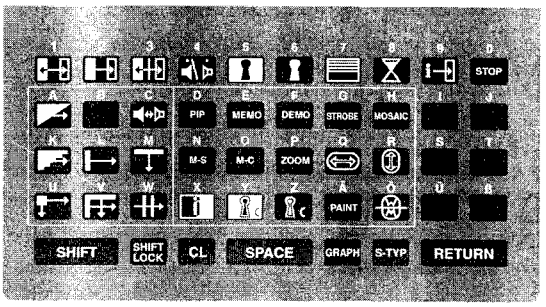
With the ▲, ▼, ◀ and ▶ buttons you can set the position of the cursor on the screen.

Enter your text with the letter and number buttons on the remote control handset.

The illustration shows the buttons with their entry options.

For upper-case letters, you have to press the SHIFT button first.





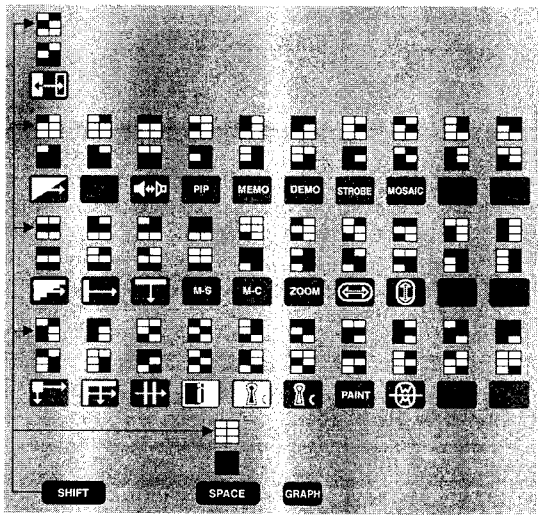
Entering graphics

Switch the buttons on the remote control handset over to graphics entry with the GRAPH button.
The indication GPH will remain in the display of the remote control handset while you are in the graphics mode.

The illustration shows the buttons with their entry options for graphic symbols. You have to press the SHIFT button to access the symbols in the top row.

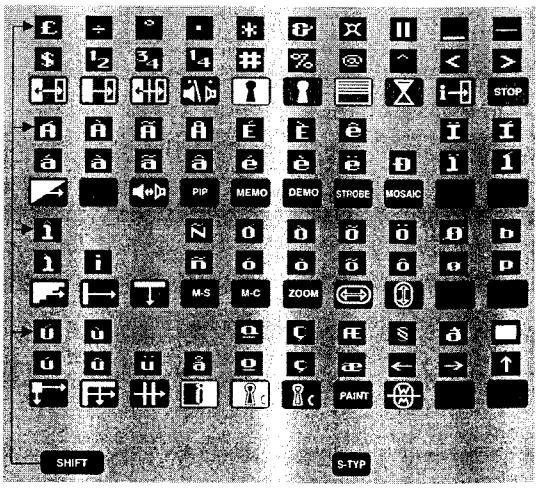
> After a graphic character has been entered, the cursor does not automatically go to the next position.
> Move the cursor to the desired position with the ▶, ◀, ▲ or ▼ buttons.

To switch back to text entry press the GRAPH button again.



Entering special characters

To switch the buttons on the remote control handset over to the special characters (one character at a time), press the S-TYP button.
This will light up in the display of the remote control handset: S-t.
S-t will disappear after every entry.
The illustration shows the buttons with their functions for special characters. You have to press the SHIFT button to access the characters in the top row.



You will find additional functions on the next page.

6. Composing Text/Graphics Boxes

Additional functions/variants

Button	Function for graphics entries
SHIFT	next character negative
SHIFT LOCK	all following characs. negative
CL	erases character at the cursor position
S-TYP and (green)	erases a complete line starting at the cursor position
SPACE	a blank space
S-TYP	switches the keypad over to the special characters
RETURN	new, next line
HEIGHT	doubles the height of the letters, characters in a line press the button again to end the function
FLASH	letters "blink" from the cursor position on
STEADY	Ends the "FLASH" function
HOLD GRAPH	repeats the character last entered
RELEASE GRAPH	Ends the "HOLD GRAPH" function
SEPAR GRAPH	switches to "point graphics"
CON GRAPH	switches to "block graphics"

Inserting text/graphics

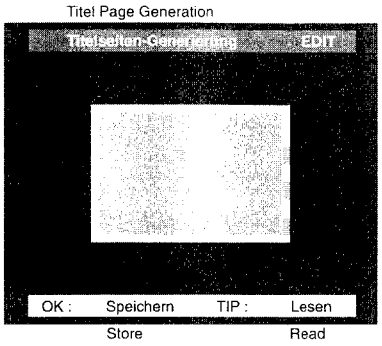
To do this, move the cursor to the desired position with the ▶, ▼, ◀ and ▲ buttons and enter the "new" text or the "new" character.
The right edge of the text/graphics box will "adjust" automatically to the amount of text/graphics.

Increasing the text/graphics box to the right – without adding text

To do this, press the SPACE button.

Putting a border around the text/graphics box

The right side of a border should only be created once the desired letters, written in shape and colour, have been created in the graphics box (see the broken line in the illustration).



Ending composing of text/graphics boxes

Press the BOX button once all changes have been made.
"POS." will appear in the upper right-hand corner of the screen (= positioning).

Positioning a text/graphics box

Fast rewind the second recorder or camcorder and, in the playback mode, locate the position where the text/graphics box is to be inserted.

Then switch the second recorder or camcorder to playback-pause (= freeze-frame).

With the ▶, ◀, ▲ and ▼ buttons you can position the text/graphics box on the screen where it is going to be taped on your holiday movie.

Storing a text/graphics box

Press the OK button.

Select the memory position by pressing one of the number buttons 1 ... 3.
The selected memory position will be shown in the "top" Info line.

> Press the number button 0 to switch back to the editing page, the page was not saved.

Store the text/graphics box with the OK button.
The text/graphics box is now filed in the selected memory position.
The "Titelseiten-Generierung" (Title Page Generation) page will appear, ready for more entries.

Press the INFO button twice to exit the editing page.
You will now see only the picture from the second recorder or camcorder on the screen.

▶▶

6. Composing Text/Graphics Boxes

Recording a text/graphics box and your holiday movie together

Call up the text/graphics box by pressing one of the number buttons [1] ... [3] and then press the [TIP] button.
The text/graphics box will fade onto the picture of the second recorder or camcorder.

Make sure you have the correct norm S-VHS or VHS!

Press the [●] button longer to start recording.
The picture from the other recorder/camcorder and the text/graphics box will be recorded.

Press the [TIP] button to stop the text/graphics box recording.
The picture from the other recorder/camcorder will still be recorded.

Press the [⏻] button to stop recording.

Changing stored text/graphics boxes

Call up the "Info" menu with the [INFO] button.

Select the "Sonderfunktionen" (Special Functions) line from the "Info" menu with the number button [4].

With the number button [1] select the "Text-Generator" line from the "Sonderfunktionen" menu.
The "Text-Generator" menu will appear, the "Text-Generierung" (Text Generation) line is marked blue.

Activate the function with the [OK] button.
The "Titel-Generierung" ("Title Generation") page will appear, "EDIT" in the top Info line indicates that the text/graphics box can be changed.

Press the [TIP] button, then call up the desired text/graphics box with the number buttons [1] ... [3].
The text/graphics box will appear, the page number will fade into the "top" Info line.

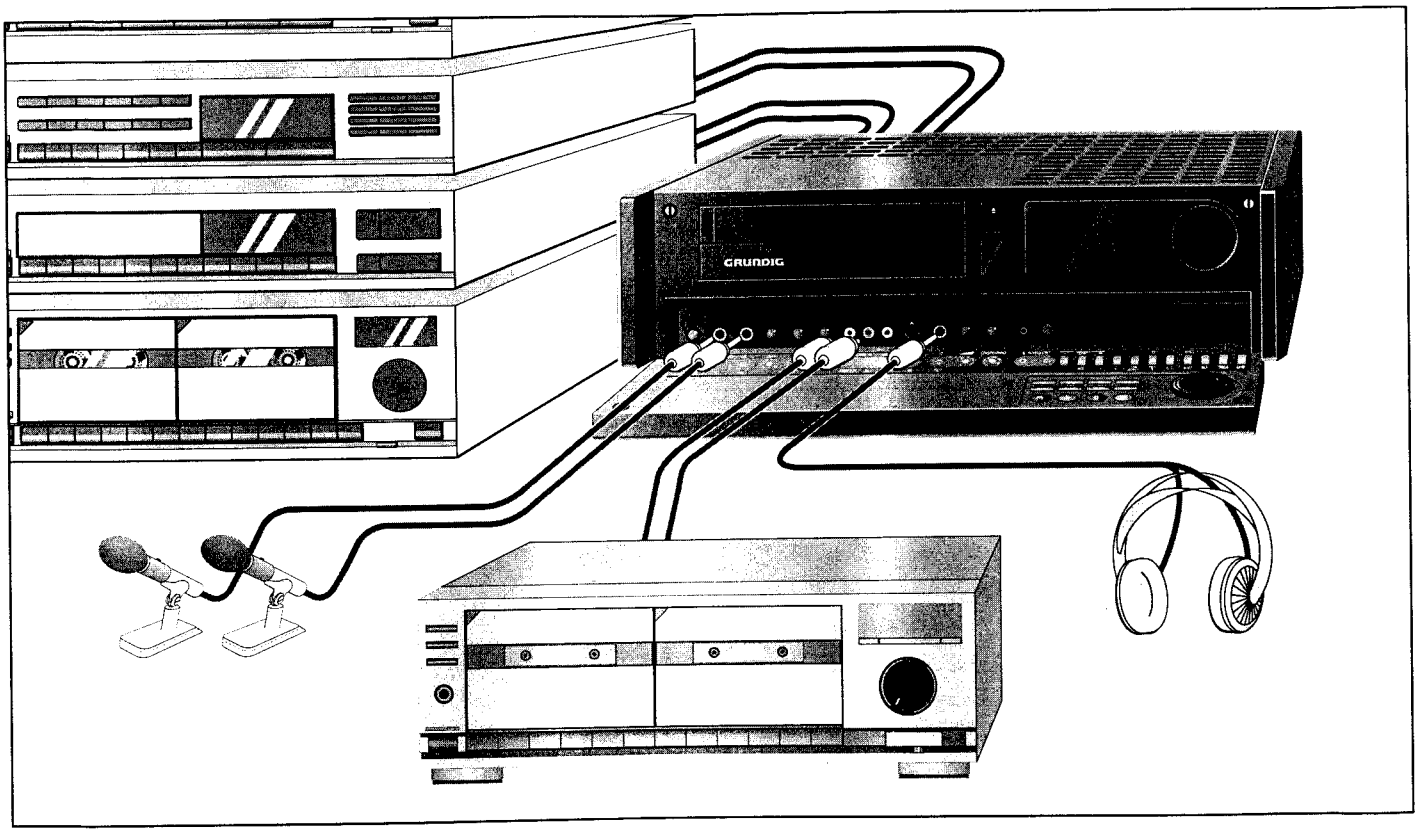
If you press the [TIP] button again, the selected text/graphics box will be "loaded" onto the editing page. The box can be modified, positioned and stored on the editing page.

7. The Multi-Audio System

Your recorder has two different recording and playback systems for sound:

the hifi (helical) track,
for stereo and two-channel recordings;
therefore, this VCR can also be used as a hifi tape recorder with which you can record and play hifi sound of the highest quality.

the mono (longitudinal) track,
for sound playback on standard VHS recorders and for adding trick sound, adding trick (mix) sound, dubbing and adding dubbing (mix) sound.
With this track you can add a new sound track to your recordings. The sound can be recorded from a hifi unit, from a cassette recorder or a CD player, from two microphones or from another VCR.



Connecting

Open the front cover of the recorder.

Connect a hifi unit to the AUDIO jacks with a commercial cinch cable (back of the recorder).
R ⊕ L = sound input, R = right channel, L = left channel;
R ⊖ L = sound output, R = right channel, L = left channel.

Connect two microphones or a stereo microphone (with 6.3 mm ø plug) to the L R IN jacks.
Connect a mono microphone to the L IN jack.

Connect a cassette recorder or CD player with a commercial cinch cable to the L AUDIO R IN jacks.

Connect headphones (with 6.3 mm ø plug) to the OUT jack.

Preparation

Turn on the hifi unit and select the sound source (for example CD player, cassette recorder, etc.).

Insert a cassette with sufficient playing time into the recorder.

It is recommended to switch the hours/minutes display to the "tape length display", which is 6 places, by pressing the button.

The "tape length display" can be set on 0 : 00 : 00 by pressing the number buttons 0 on the remote control handset and then pressing the button.

7. The Multi-Audio System

The Recorder as a Hifi Audio Tape Player

As long as there are no other instructions, execute the following functions with the buttons and controls on the recorder. The controls can be put in the "out" position by pressing on them.

Recording sound from a hifi unit

Press the Hi-Fi button (= loop-through mode).
You will see this on the recorder: HI.
The sound level will be automatically selected.

Selecting the sound level manually (if desired)

Press the AUTO MAN button, you will see this indication on the recorder: MAN.
Then turn the MASTER control to the right until the first red mark (+1 dB) lights up when the sound is at its loudest.

Selecting the longplay mode (if desired)

Press the LP button.
You will see this in the recorder's display: LP, the playing time of the cassette will double.

Starting sound recording

Press the ● button longer.

Sound recording-pause

Press the II button.

Continuing sound recording

Press the ● button.

Stopping sound recording

Press the ■ button.

Sound recording from several sources

You have the possiblity of recording sound from three sources.
From a hifi unit that is connected to the AUDIO R ⊖ L jacks (on the back of the recorder);
from a cassette recorder or CD player that is connected to the AUDIO IN L R jacks (on the front of the recorder);
from two microphones that are attached to the L R jacks (on the front of the recorder).

Press the Hi-Fi button (= loop-through mode).

Press the MIX button.
You will now hear the sound from the hifi unit, from the cassette-recorder/CD player or from the two microphones.

Mixing and selecting the sound ratio:

Turn the MASTER control to the right until it stops.

Select the sound from the hifi unit with the LINE control;
select the sound from the cassette recorder or CD player with the Hi-Fi control;
select the sound from both microphones with the control,
control in out position = right channel,
control in out position and pulled = left channel.

When the sound is at its loudest the first red mark should light up (+1 dB).

It is recommended to "turn off" the unused sound inputs by turning the respective control to the left until it stops.

Starting recording

press the ● button longer.

Recording-pause

press the II button.

The sound can be faded in and out with the MASTER control.

The mix functions cannot be turned off during recording.

Stopping recording

press the ■ button.

Monitoring the sound recording

This can be done using speakers attached to the stereo unit,

using a stereo TV set

using headphones that are connected to the OUT jack and whose volume can be adjusted with the control.

Hifi sound playback

Press the ▶ button to start playback.

-The recorder automatically switches to longplay mode for LP recordings.

Selecting sound track

You can select the desired sound track for the playback of cassettes that were recorded with stereo or two-channel programmes.

Stereo (hifi helical track) = basic setting

You will see this on the recorder: ∞.

Repeatedly pressing the ▯ TONE SELECT button selects:
sound track 1 – the indication 1 appears on the recorder.

sound track 2 – the indication 2 appears on the recorder.

mono/longitudinal track – no display.

mix mode (hifi helical track, mono longitudinal track) – the MIX indication appears on the recorder

basic setting – you will see this indication: ∞.

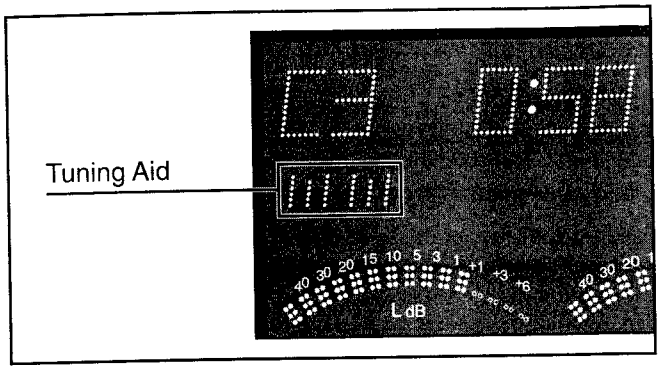
The sound in mix mode is dependent on the position of the
○ Hi-Fi and ○ LINE controls.
○ Hi-Fi control = hifi helical track
○ LINE control = mono longitudinal track
○ ◢ control = microphone
The sound balance between the hifi helical track and the mono longitudinal track can be changed with these controls.

In mix mode you can also comment on the playback. This commentary will not be recorded. To do this connect a microphone to the L ⏀ IN jack or a stereo microphone to the L ⏀ R IN jacks, you can change the volume with the ○ ◢ control.
Control in out position, right channel,
Control in out position and pulled, left channel.

Setting the hifi tracking

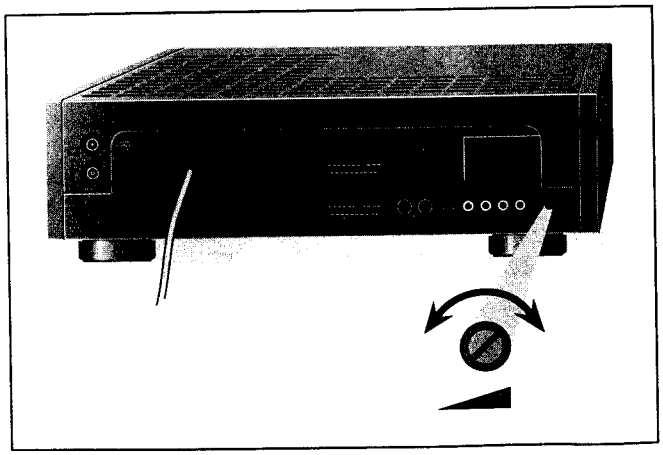
When playing a cassette "unfamiliar" to the recorder, it might be necessary to readjust the tracking.

To do this press the ▯ – TRACKING + ▯ buttons continuously.
The more vertical lines that light up in the sound display of the right channel, the better the playback quality.



Adjusting the volume

If you notice a difference in volume between the sound from the recorder and the sound from the hifi unit, you can adjust the volume of the recorder with the sound level control ◢ (on the back of the recorder).



Simultaneously Adding Mix Sound

You can additionally record the sound from an external sound source (for example, a hifi unit or a microphone) while recording a picture/sound signal (for example, from television programmes or from a second recorder or a camcorder). The same mix sound will be recorded on the hifi (helical) track as on the mono (longitudinal) track.

Preparation

Open the front cover of the recorder.

Insert a cassette that can be recorded on/over.

Select the picture/sound source on the recorder with the jog wheel. The desired display indication will appear on the recorder:

1...99 = TV station programme position;

AV = picture/sound source at ⊖ EURO-AV ⊖ jack;

CV = picture/sound source at the AUDIO IN and VIDEO IN jacks;

CVS1 = picture/sound source at the S-VHS IN and AUDIO IN jacks (front of recorder);

Start playback on the external picture/sound source.

Activate the mix sound by pressing the ⊐ MIX button.

Turn the ○ MASTER control to the right until it stops.

Mixing the sound balance:

the sound from the TV programmes or the second recorder/ camcorder with the) Hi-Fi control;
the sound from the hifi unit with the) LINE control;
the sound from the microphone with the) ◢ control.
Control in out position = right channel,
Control in out position and pulled = left channel.

The first red mark (+1 dB) should light up when the sound is at its loudest.

> It is recommended to "turn off" the unused sound inputs by turning the respective control to the left until it stops.

Starting mix sound

Press the [●] button longer.
The sound can be faded in and out with the) MASTER control.

> The mix functions cannot be turned off during recording.

Ending simultaneous mix sound

Press the [⏻] button.

7. The Multi-Audio System

Adding a Sound Track

Dubbing

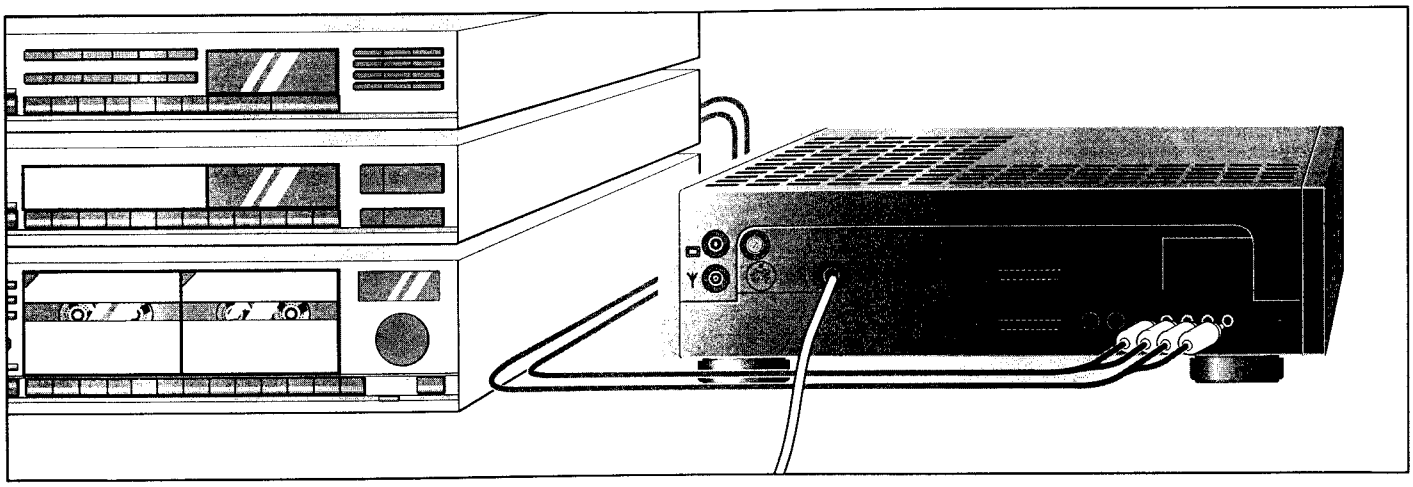
You can add a new sound track to a picture recording.

The original sound from the longitudinal track will be entirely erased, the hifi (helical) track will remain as it is.

Trick

Extra "new sound information" can be added to the sound recording on the longitudinal track.
The original sound will only get softer (background sound) when the external sound source is "active".
If the sound source is muted, the original sound will get louder again.
During playback, all sound information can be heard.

The louder the level control is, the quieter the original sound on the longitudinal track will get.
The hifi (helical) track will remain unchanged.



Connecting

Connect the hifi unit to the audio jacks on the back of the recorder with a commercial cinch cable.
R = right channel; L = left channel

Preparation

As long as there are no other instructions, execute the following functions with the buttons and controls on the recorder.

Open the front cover of the recorder.

Insert a previously recorded cassette into the recorder.

Monitoring sound recording

Using headphones connected to the ∩ jack (headphone specifications: 8Ω - 2kΩ impedance, jack plug 6.3mmø).

You can adjust the volume with the ○ ⍾ ◢ control.

Selecting the sound level...

.. automatically

Press the Hi-Fi button (= loop-through mode).

Display on the recorder: HI.
The sound level will be automatically selected.

... manually (if desired)

Press the AUTO MAN button, display on recorder: MAN.
Then turn the MASTER control to the right until the first red mark (+ 1 dB) lights up at the loudest sound.

In the playback mode, locate the position on the tape where the dubbing should begin, then press the ⏸ button (playback-pause).
Display on recorder: ⏸.

Press the DUB button (activates the DUBBING function).
Display on recorder: DUB and HI.

Press the TRICK button (activates the trick function).
You will see this on the recorder: TRICK and HI.

Starting dubbing

Press the ▶ button and dubbing will start.
The original sound remains on the hifi track, the new sound will be on the longitudinal track.

Stopping adding of sound track ...

... Dubbing

Press the DUB button.
The video recorder will switch to playback. You will hear the sound from the mono (longitudinal) track. The display on the recorder will change from DUB to NORMAL.

... Trick

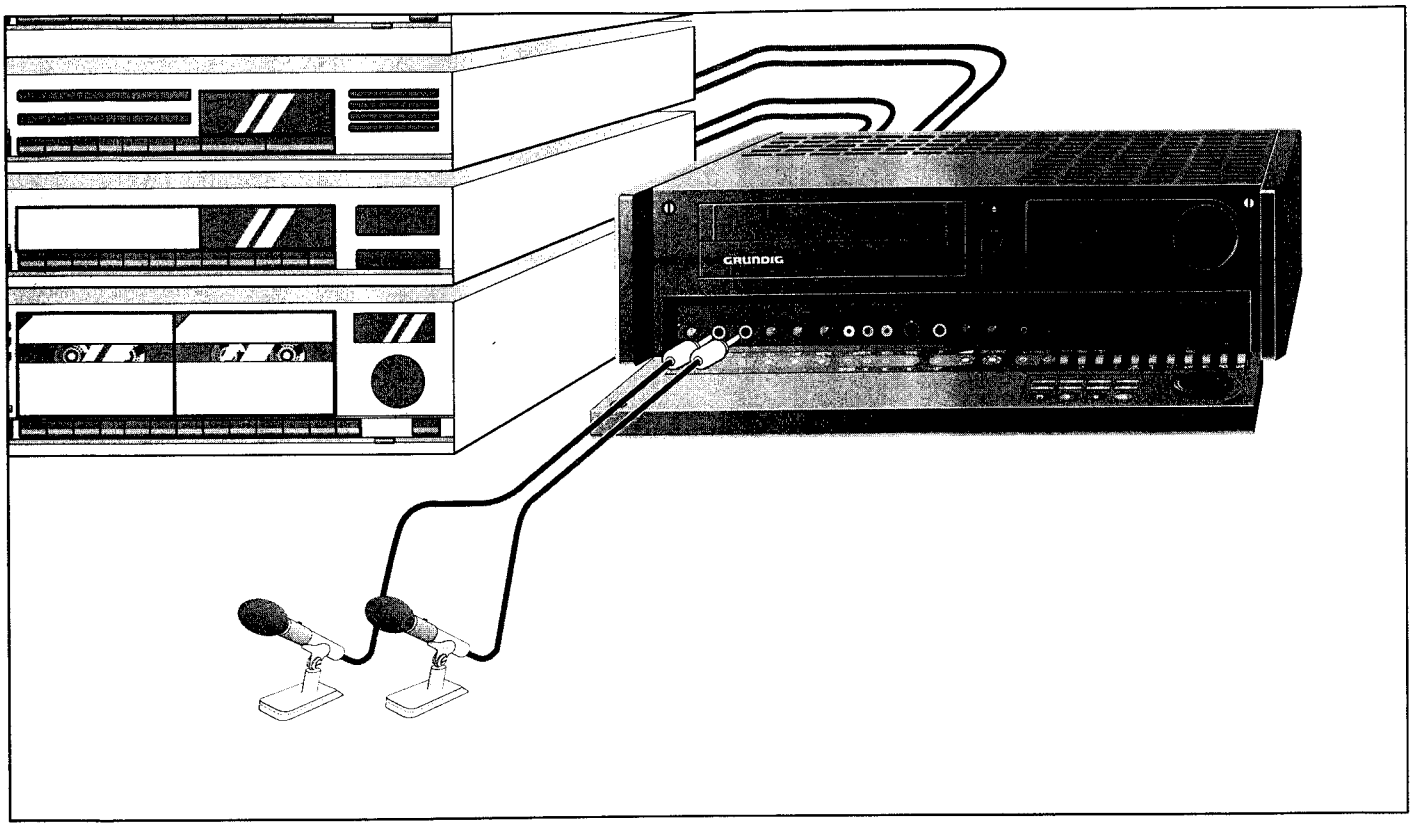
Press the TRICK button.
The video recorder will switch to playback. You will hear the sound from the mono (longitudinal) track. The display on the recorder will change from TRICK to NORMAL.

If you want to hear the sound on the mono (longitudinal) track and the hifi track, press the TONE SELECT button, display on recorder: MIX.

Additional mix mode

If you want to add mix sound to the dubbing or trick modes, you have to press the ☐ MIX button.

You can use three sound sources for the mix mode:
the sound on the hifi track of the tape;
the sound that comes from a hifi unit through the AUDIO jacks;
the sound that is supplied by the microphones.



Connecting

Connect the hifi unit to the audio jacks on the back of the recorder with a commercial cinch cable.

R = right channel; L = left channel.

Connect two microphones to the L ○ R IN jacks on the front of the recorder.
Microphone specifications:
Level ≥ 0.2 mV
Impedance: 200 Ω - 10 kΩ
Jack plug 6.3 mm ø

Preparation

Insert a previously recorded cassette into the recorder.

Selecting the sound

Press the Hi-Fi button and then the ☐ MIX button (= loop-through mode).
Display on recorder: MIX, HI and MAN.
Then you can mix and select the sound:
the sound from the hifi track on the tape with the ○ Hi-Fi control;

> This setting can only be made when the tape is in operation, turn the control to the middle position;

the sound from the stereo unit with the ○ LINE control;

the sound from the microphone with the ○ control.

To control the level of the sound signal, turn the ○ MASTER control to the right until it stops and adjust the sound with the above-listed controls so that the sound is at its loudest when the first red mark (+ 1 dB) lights up.

▶▶

Then the sound can be faded in and out again with the ○ MASTER control.

It is recommended to "turn off" unused sound inputs by turning the respective control to the left until it stops.

In playback mode, locate the place on the tape where the dub is to begin, then press the ⏸ button.
Display on recorder: ▯▯.

Press the ▯ DUB button as well as the ▯ MIX button (activates the dubbing-mix function).
Display on recorder: D-MIX and MAN.

Press the ▯ TRICK button as well as the ▯ MIX button (activates the trick-mix function).
Display on recorder: T-MIX and MAN.

Adding the sound

Press the ▶ button to start adding the sound.
The original sound remains on the hifi track, the new sound will be on the longitudinal track.

Stopping adding of sound track ...

... Dubbing

Press the ▯ DUB button.
The recorder will switch to playback. You will hear the sound from the mono (longitudinal) track. The display on the recorder will change from DUB to NORMAL.

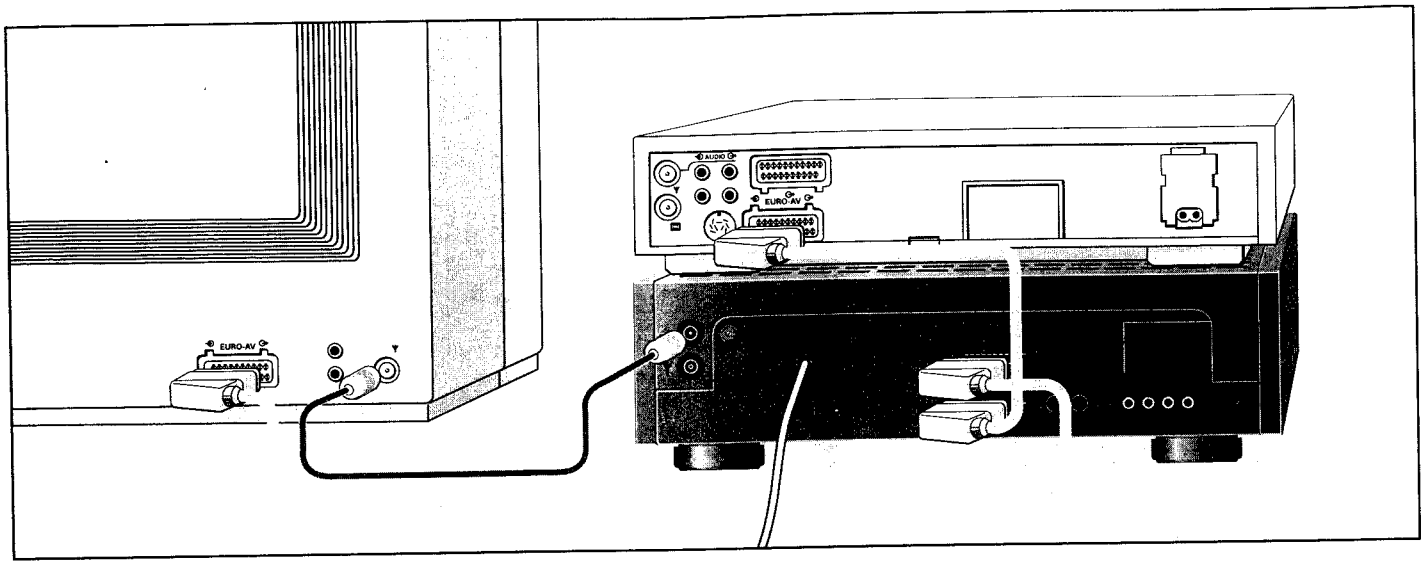
... Trick

To do this press the ▯ TRICK button.
The video recorder will switch to playback. You will hear the sound from the mono (longitudinal) track. The display on the recorder will change from TRICK to NORMAL.

If you want to hear the sound on the mono (longitudinal) track and hear the hifi track, press the ▯ TONE SELECT button, MIX will appear in the recorder's display.

8. Special Functions

Operation with a Second Recorder



Connecting

Connect the ⊖ EURO-AV ⊖ jack on your recorder to the corresponding jack on the other recorder.
Connecting cables are available from electronics stores.

If the second recorder supplies a Y-chroma signal (separate picture and colour signal), use the setting on page 73.

Preparation

Turn on the TV set (serves as a monitor) and select the AV programme position for the video recorder.

Open the front cover of the recorder.

Insert the cassette to be copied into the playback recorder and a cassette with sufficient playing time into the recording VCR.

Tape transfer

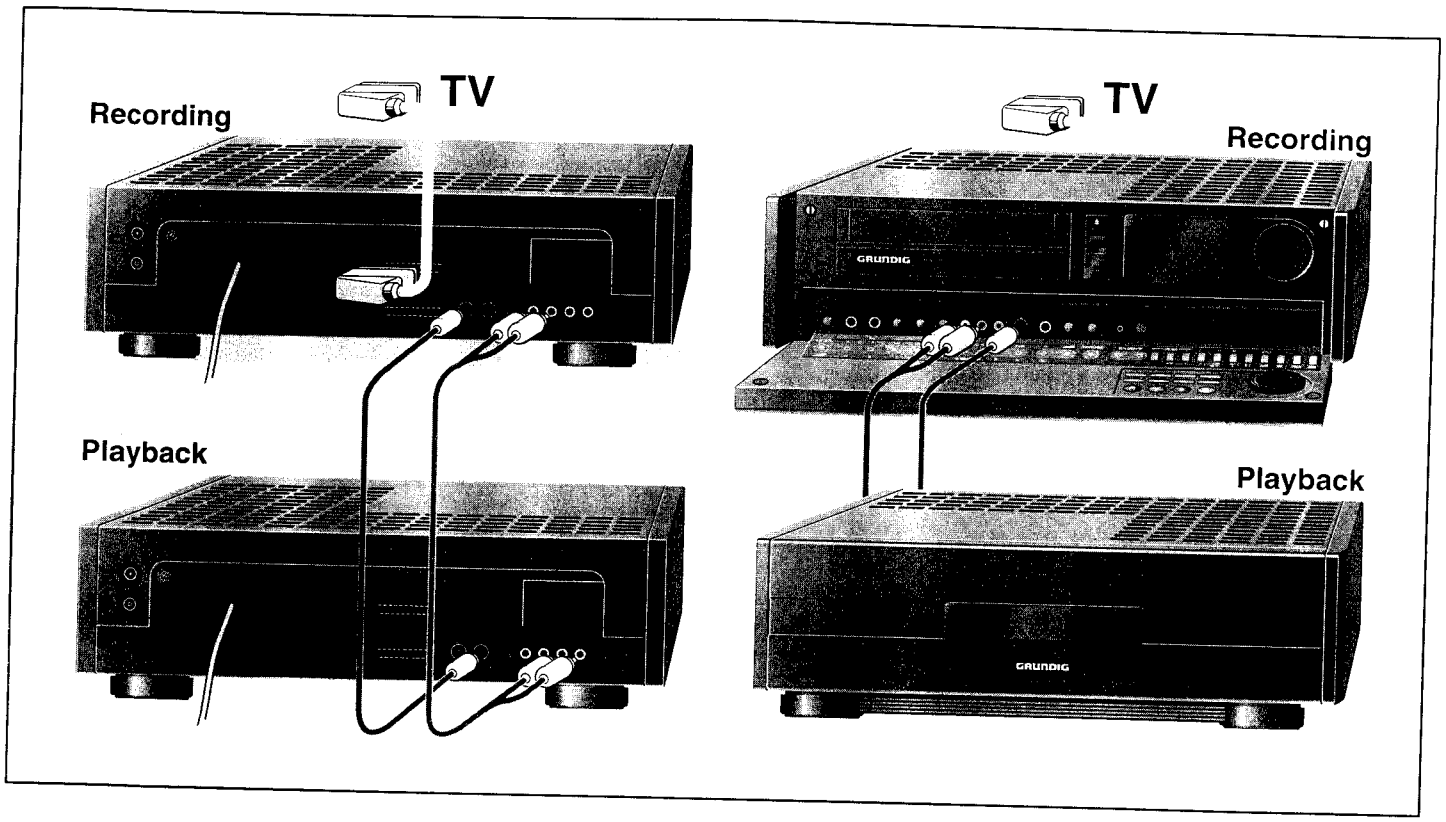
Press the AV/CV button on the remote control handset until AV appears in the display of the recorder.

Start the playback on the playback recorder and, at the same time, press the ● button longer on the recording VCR.
The tape transfer will be in operation, the TV screen can be used as a monitor.

Stop recording with the ⏻ button.

8. Special Functions

Operation with a Second S-VHS Recorder



Connecting

Jacks on the back of the recorder

Picture signal

Connect the S-VHS ⊖ jack (= S-VHS jack S 2) on your recorder with the corresponding picture jack on the other S-VHS recorder.

Sound signal

Connect the AUDIO R ⊖ L jacks on your recorder with the corresponding sound jacks on the other recorder.

Jacks on the front of the recorder

Open the front cover of the recorder.

Picture signal

Connect the S-VHS IN jack (= S-VHS jack S 1) on your recorder to the corresponding picture jack on the other S-VHS recorder.

Sound signal

Connect the L AUDIO R jacks on your recorder with the corresponding sound jacks on the other S-VHS recorder.

An adapter cable is available from electronics stores.

If the second recorder supplies a y-chroma signal (separate picture and colour signal), use the setting on page 73.

Tape transfer

Turn on the television set (serves as a monitor) and select the AV programme position for the video recorder.

Insert the cassette to be transferred into the playback recorder and insert a cassette with sufficient playing time into your recording VCR.

Select the input jacks by pressing the AV/CV button until CV S1 (for the S-VHS ⊖/AUDIO R ⊖ L jacks) or CV S2 (for the S-VHS IN/L AUDIO R jacks) appears in the recorder's display.

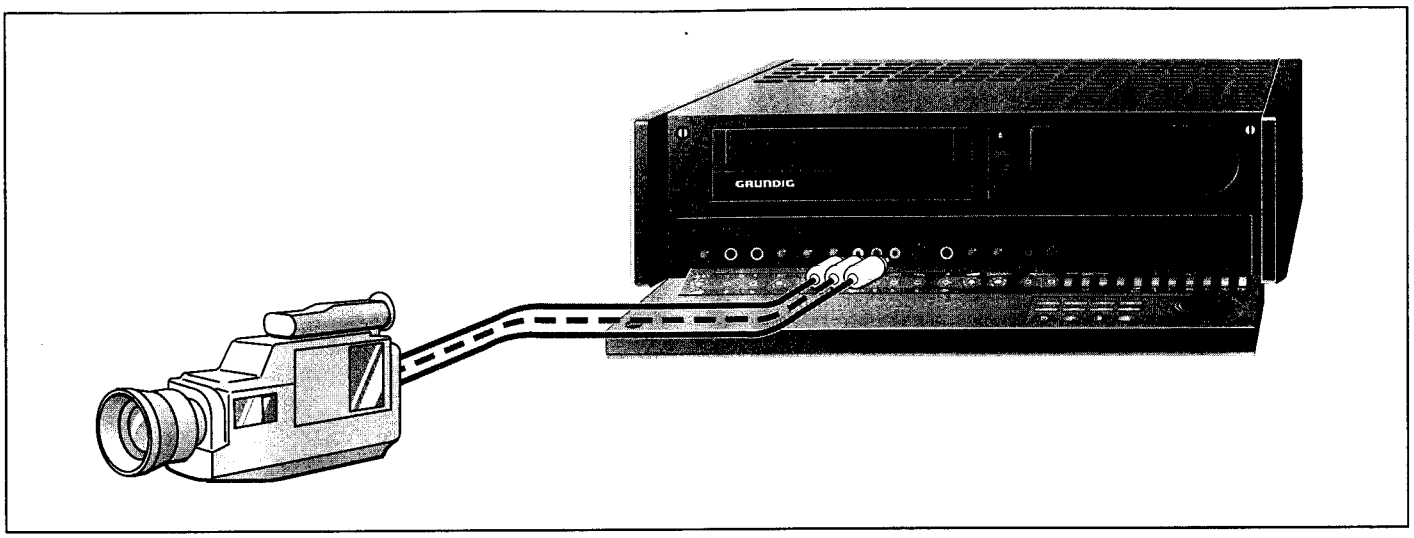
Start the playback on the playback recorder, and, at the same time, press the ● button longer on the recording VCR.
The tape transfer will "run", the screen can be used as a monitor.

Press the ⏻ button to stop recording.

8. Special Functions

Operation with a Camcorder

Re-recording (without the synchro-edit-start function)



Connecting

Open the front cover of the recorder.

Picture signal

Connect the VIDEO IN or S-VHS IN jack on your recorder to the corresponding picture jack on the camcorder.

Camcorder with mono sound

Connect the MONO IN jack to the sound jack on the camcorder.

Camcorder with stereo sound

Connect the L-AUDIO-R IN jacks to the sound jacks on the camcorder.

If the second recorder supplies a Y-chroma signal (separate picture and colour signal), use the setting on page 73.

Preparation

Turn on the television set (serves as a monitor) and select the AV programme position for video playback.

Insert the cassette to be copied into the camcorder, insert a cassette with sufficient playing time in the recording VCR.

Tape transfer

In playback mode, locate the end of the scene onto which the new recording is to be joined by pressing the ⏸ button (playback-pause).
Display on recorder: ▯▯.

Switch the recording VCR to recording-pause by pressing the ● button longer. Display on recorder: ⏺ ▯▯.

Press the AV/CV button until CV (for VIDEO IN/L AUDIO R IN jacks) or CV S2 (for S-VHS IN/L AUDIO R IN jacks) appear in the display.

In playback mode on the camcorder, locate the beginning of the desired scene, also selecting the ○ LINE on your recorder with the level control (monitoring is possible with headphones attached to the 🎧 jack on the recorder). Then press the pause button on the camcorder (playback-pause).

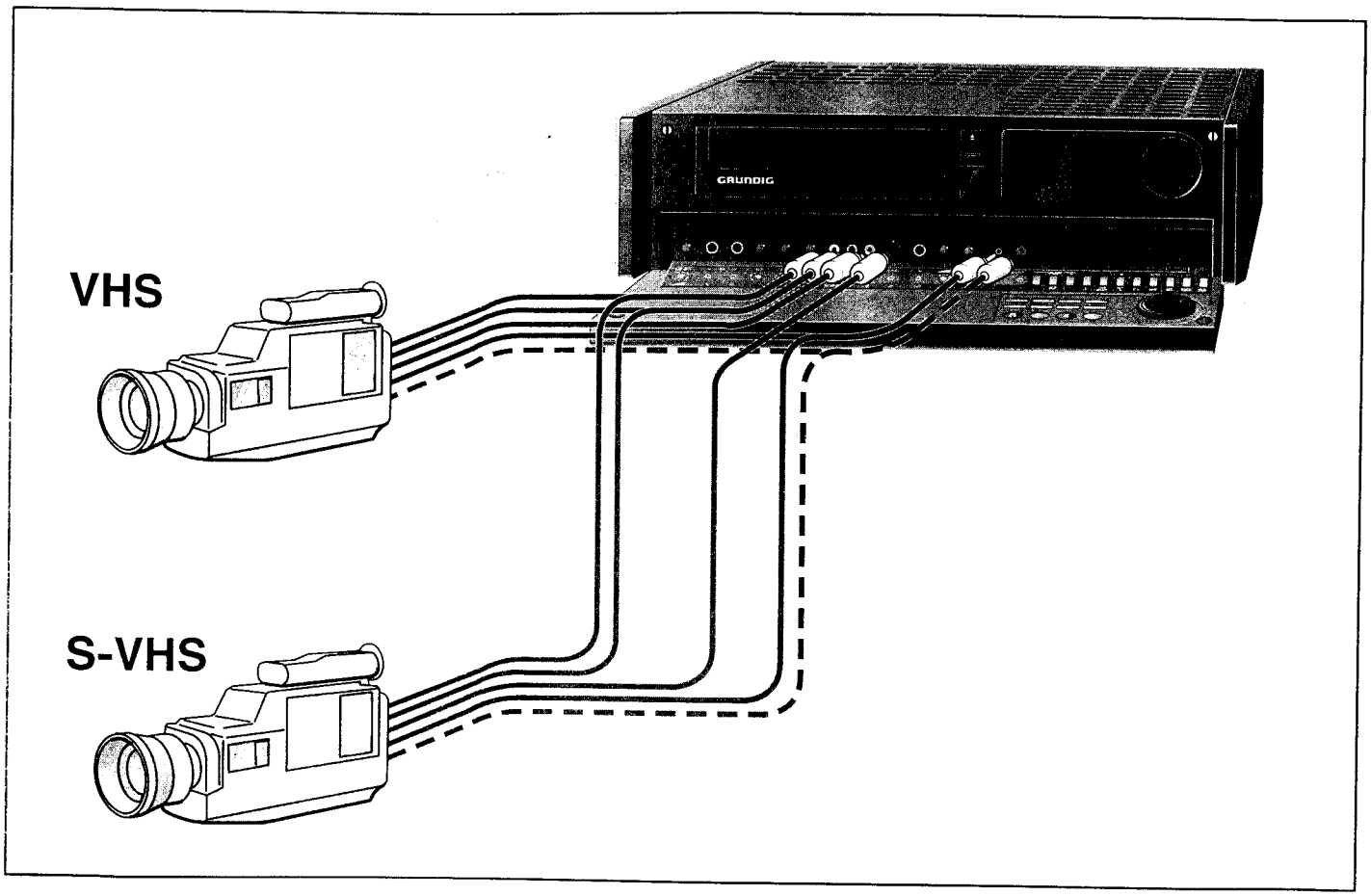
Start the playback on the camcorder, and, at the same time, start recording by pressing the ● button again.

The tape transfer is in operation, the TV screen can be used as a monitor.

Stop recording with the ⏻ button.

Synchronized Tape Transfer and Editing without Loss

Synchro-edit-start function.
Synchronized tape transfer and editing without loss using the dialogue between your recorder (GV 280) and any GRUNDIG camcorders whose operating instructions describe this option.



Connecting

Open the front cover of the recorder.

Picture signal

Connect the VIDEO IN or S-VHS IN jack on your recorder to the corresponding picture jack on the camcorder.

Sound signal

For camcorders with mono sound, connect the MONO IN jack to the sound jack on the camcorder.

For camcorders with stereo sound, connect the L-AUDIO-R IN jack to the sound jacks on the camcorder.

Control signal

Connect one of the SYNCHRO-EDIT jacks on your recorder to the corresponding start/stop jack on the camcorder (independent of your camcorder).
Adapter cables are available at electronics stores.

The synchro-edit-start function via the 5-pin socket is not compatible with the Panasonic system.

Preparation

Turn on the television set (serves as a monitor) and select the AV program position for the video recorder.

Insert the cassette to be copied in the camcorder and a cassette with sufficient playing time into your recording VCR.

Tape transfer

In playback mode on the VCR, locate the end of the scene onto which the new recording is to be joined, then press the ⏸ button (playback-pause).
Display on recorder: ▯▯.

Switch the recording VCR to recording-pause by pressing the ● button longer. Display on recorder: ⏺ ▯▯.

Press the AV/CV button until either CV (for the VIDEO IN/ L-AUDIO-R IN jacks) or CV S2 (for S-VHS IN/ L-AUDIO-R IN jacks) appears in the display on the recorder.

In playback mode on the camcorder, locate the beginning of the desired scene, while also selecting the ○ LINE on your recorder with the level control (monitoring is possible with headphones attached to the ∩ jack on the recorder).

Then press the pause button on the camcorder (playback-pause).
Display on recorder: CAMERA.

Start the synchronized tape transfer by pressing the ● button again. Display on recorder: SYN-ED

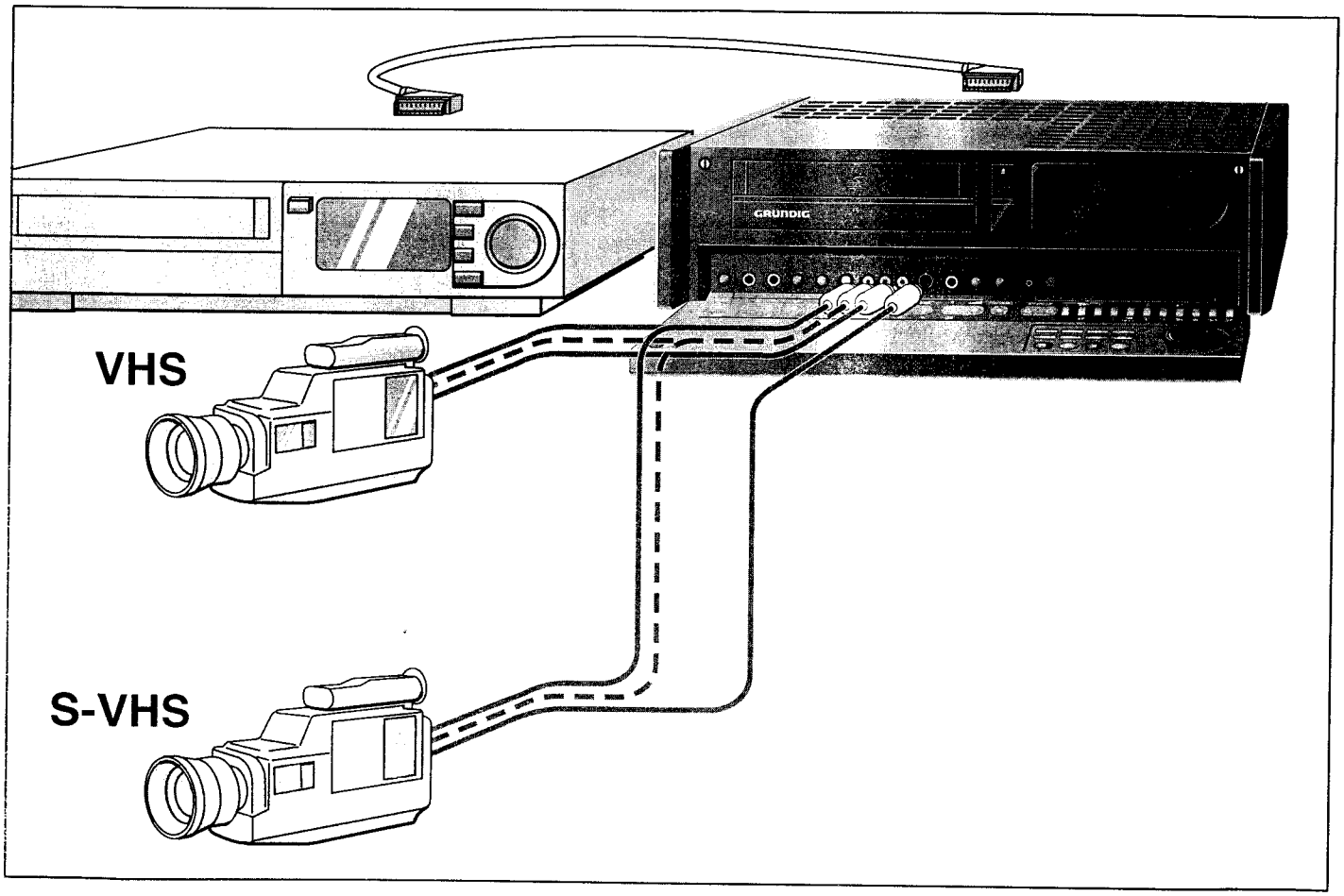
After a short data dialogue between the VCR (GV 280) and the camcorder, the playback on the camcorder and the recording on the VCR (GV 280) will start synchronously (at the same time).

Stop recording wiht the ⏻ button.

8. Special Functions

Inserting New Recordings at a Later Date (Insert-Cut)

You can insert new recordings into already existing recordings, for example, specific scenes that are played back from external picture/sound sources.



Connecting

Open the front cover on the recorder.

Picture/sound source at the ⊖ EURO-AV ⊖ jack:

Picture/sound source at the AUDIO IN and VIDEO IN jacks;

Picture/sound source at the S-VHS IN and AUDIO IN (front) jacks;

Sound source at the AUDIO R ⊖ L (back) jacks.

Preparation

As long as there are no other instructions, execute the following functions with the buttons and controls on the recorder.

The controls can be put in the "out" position by pressing on them.

In playback mode or forward/reverse picture search, locate the position on the tape where the recording to be inserted should end, then press the [II] button and then the [MARKE] button. The tape position is electronically marked.
Display on recorder: INSERT.

The hour/minute display will automatically switch to the 5-place tape length display. The tape length display will automatically be set on 0:00:00.
In the playback mode (reverse picture search or reverse mode), locate the position on the tape where the recording to be inserted is to begin. A – (minus sign) will appear in front of the tape length display.
Press the ⏸ button and then the INSERT button.
The position on the tape is electronically marked.
The recorder will automatically switch to recording-pause.
You will see this on the recorder: ⏺ ⏸.

Selecting the programme source

Turn the jog wheel until the desired display appears on the recorder:

1...99 = TV station programme position;

AV = picture/sound source at the ⊖ EURO-AV ⊖ jack;

CV = Picture/sound source at the AUDIO IN and VIDEO IN jacks;

CVS1 = Picture/sound source at the S-VHS IN and AUDIO IN jacks (front of recorder);

The different insert options

Insert

Display on recorder: INSERT.
Only the new picture signal will be inserted, the sound from the old recording on the mono track will be transferred to the helical (stereo) track.

Insert/dubbing

Select the function with the ☐ DUB button.
Display on recorder: INS=D.

The new picture/sound signal will be inserted. The new sound signal will be recorded on the longitudinal and helical tracks, the old sound signal will be erased.
The sound level will be automatically selected.
If you want to select the sound level manually, press the ☐ AUTO/MAN button and turn the ○ MASTER control to the right until the first red mark (+1 dB) on the sound display lights up when the sound is at its loudest.

Insert/trick

Select this function with the ☐ TRICK button.
Display on recorder: INS=T.
The new picture signal will be inserted.
The new sound signal will be recorded on the helical track, the old sound signal on the longitudinal track will get quieter, the higher the sound level is.
The sound level will be automatically selected.

If you want to set the sound level manually, press the ☐ AUTO/MAN and turn the ○ MASTER control to the right until the first red mark (+1 dB) on the sound display lights up when the sound is at its loudest.

Insert/dubbing/mix

Select the function by first pressing the ☐ DUB button and then the ☐ MIX button.
Display on recorder: INS=DM and MAN.
The new picture/sound signal will be inserted.
Thw new sound signal can be recorded and mixed from the following sources:
AUDIO R ⊖ L jack (back of recorder), adjustable with the ○ LINE control;
from the helical track on the tape (= sound on the old recording), adjustable with the ○ Hi-Fi control;
from two microphones (L ○ R jacks, front of recorder), adjustable with the ○ ◢ control. Control out = right channel, control out and pulled = left channel.

To set the level of the sound signal, turn the ○ MASTER control to the right until it stops and and adjust the sound with the above-listed controls so that the first red mark (+1 dB) lights up when the sound is at its loudest.
The sound can then be faded in and out with the ○ MASTER control.

> It is recommended to "turn off" the unused sound inputs by turning the respective controls to the left until they stop.

Insert/trick/mix

Select the function by first pressing the ☐ TRICK button and then the ☐ MIX button.
Display on recorder: INS=TM and MAN.

These variants are the same as those described above. The difference is that the old sound signal on the longitudinal track will become quieter, the higher the level control is.

Starting the insert function

Start the playback on the external picture/sound source.

Start the insert function by pressing the ⏸ button.

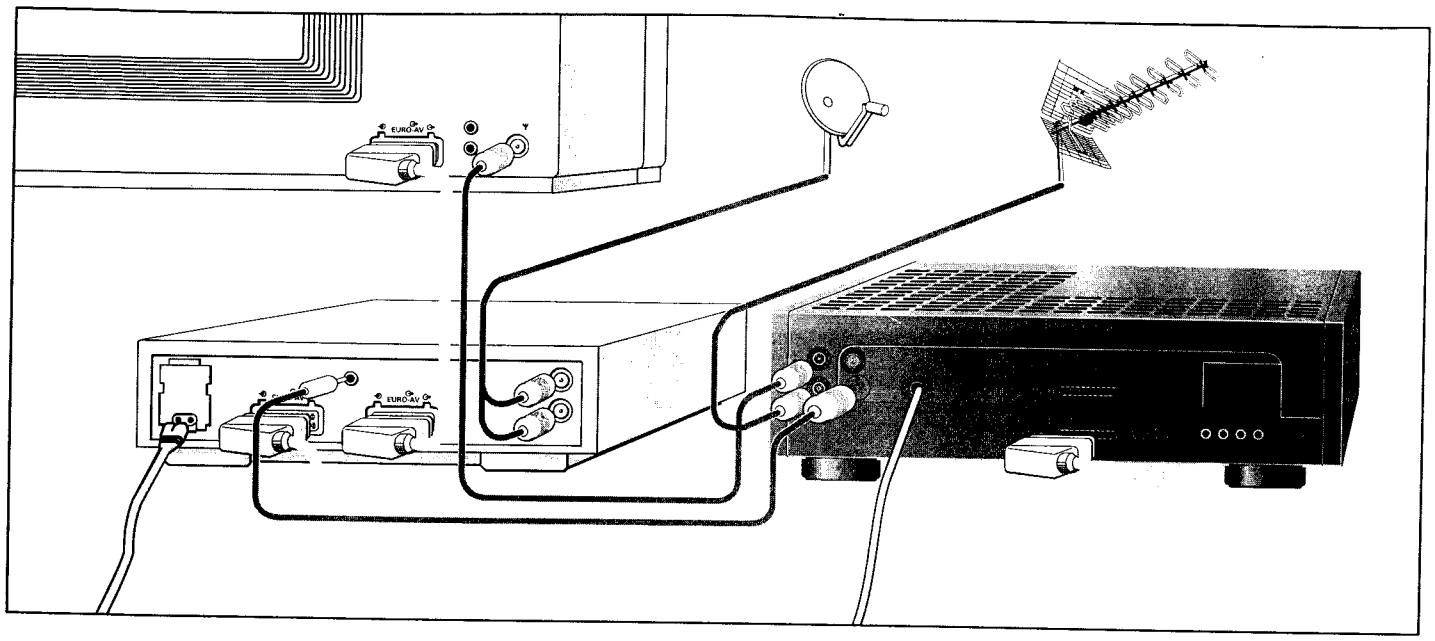
The new picture scenes will be inserted between the marked positions on the tape, then the recorder will switch to playback-pause.
Display on recorder: ⏸.

Ending the insert function

Press the ⏻ button.

8. Special Functions

Operation with a GRUNDIG Satellite Receiver with Two EURO-AV Jacks



Preparation

Turn off the television set and the satellite receiver.

Pull the power cord to the video recorder out of the outlet.

Connecting

Put the aerial plug from the satellite aerial into the **X** or **Y** jack on the satellite receiver.

Connect the EURO-AV jack (to the recorder) on the satellite receiver to the ⊖ EURO-AV ⊖ jack on the recorder with the EURO-AV cable.

Connect the VCR jack on the satellite receiver to the universal jack on the VCR with the GRUNDIG SAT-FB cable* (order no. 27511-384.01).

Put the aerial plug for a standard house aerial into the Y jack on the video recorder.

Connect the ▭ jack on the video recorder to the Y jack on the television set with a commercial cable.

Connect the EURO-AV jack ▭ on the satellite receiver to the EURO-AV jack on the television set with a EURO-AV cable.

* Consult your dealer.

Operation

Turn on the television set and the satellite receiver.

Plug the power cord for the VCR back in.

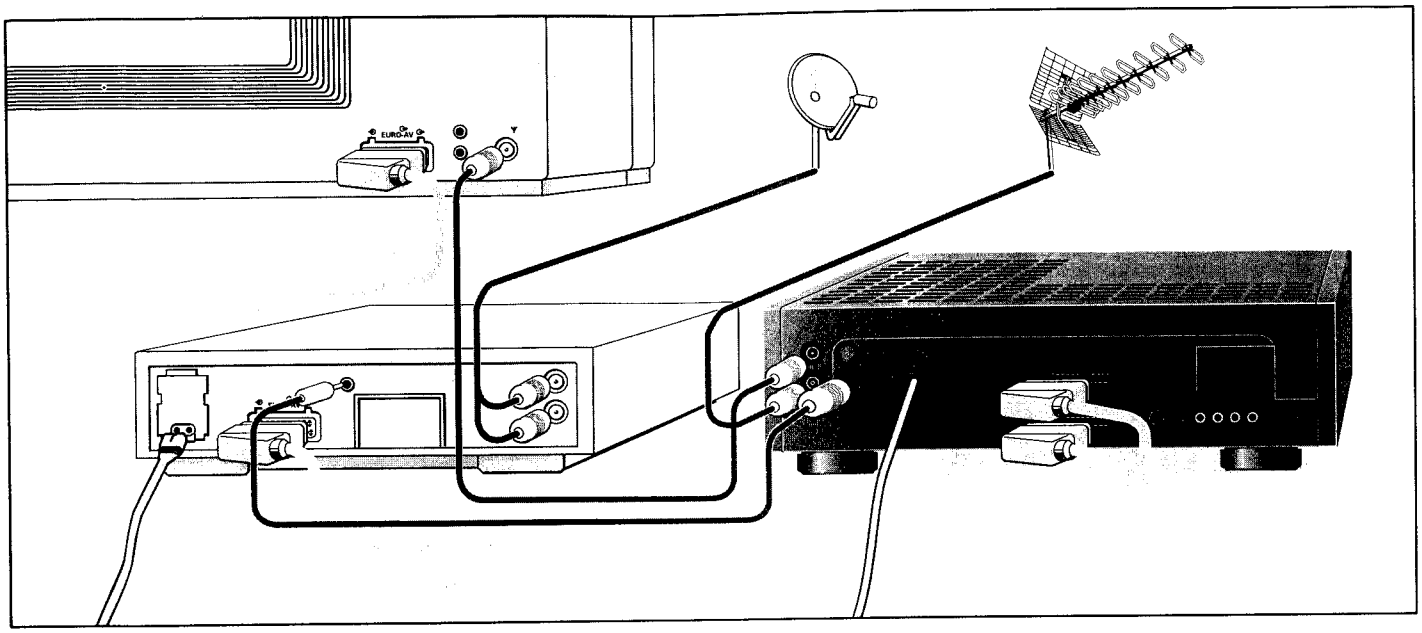
A description of how to record satellite broadcasts can be found in the first part of the operating instructions on page 32.

A description of recording programming for satellite broadcasts can be found in the first part of the operating instructions in the programming examples in variants 1 and 3.

Please note!
The satellite receiver has to be switched to "stand by" so that the picture/sound signal from the VCR is transferred to the televison set using the EURO-AV connection.

8. Special Functions

Operation with a GRUNDIG Satellite Receiver with One EURO-AV Jack



Preparation

Turn off the television set and the satellite receiver.

Pull the power cord to the video recorder out of the outlet.

Connecting

Put the aerial plug from the satellite aerial into the **X** or **Y** jack on the satellite receiver.

Connect the EURO-AV jack (to the recorder) on the satellite receiver to the ⊖ EURO-AV ⊖ jack on the recorder with the EURO-AV cable.

Connect the VCR jack on the satellite receiver to the universal jack on the VCR with the GRUNDIG SAT-FB cable* (order no. 27511-384.01).

Put the aerial plug for a standard house aerial into the Y jack on the video recorder.

Connect the ▭ jack on the video recorder to the Y jack on the television set with a standard commercial cable.

Connect the EURO-AV ⊖ jack on the video recorder to the EURO-AV jack on the television set with a EURO-AV cable.

* Consult your dealer.

Operation

Turn on the television set and the satellite receiver.

Plug the power cord for the VCR back in.

A description of how to record satellite broadcasts can be found in the first part of the operating instructions on page 32.

A description of recording programming for satellite broadcasts can be found in the first part of the operating instructions in the programming examples in variants 1 and 3.

Please note!
If you want to watch a satellite programme on the television set, the video recorder has be switched to EE mode (= loop-through mode) by pressing the ⏻ button.
Then press the AV/CV button on the remote control handset.
Display on recorder: AV.

8. Special Functions

Tape Transfer with ...

... a D 2-MAC decoder,

... television sets with the 16:9 format,
... a video recorder/camcorder with Y-chroma signal (separate picture and colour signal).

When operating one of these units it is necessary to adapt the input jacks on the recorder.

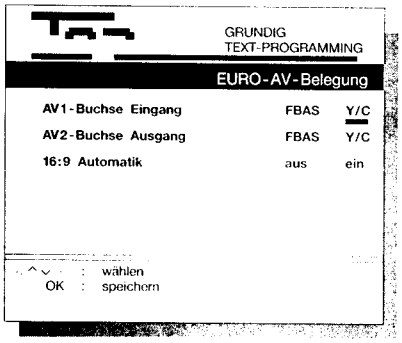
Press the INFO button.

With the number button 4 select the "Sonderfunktionen" (Special Functions) line from the "Info" menu.

The "Sonderfunktionen" menu will appear.

With the number button 3 select the "Externe Anschlüsse" (External Connections) line from the "Sonderfunktionen" menu.

The "Externe Anschlüsse" menu will appear.



The different lines can be selected with the ▼ or ▲ buttons.
The desired functions can be selected with the ◀ or ▶ buttons.
The selected position is underlined in blue. If the position is stored, the marking will turn green.

Store the function with the OK button.

The recorder will switch to the television picture.

Frame Converter

Since your video recorder can only record standard picture signals (FBAS-PAL signal), it is necessary to adapt this signal when recording FBAS (CCVS) signals by using other line numbers.

To do this, press the ▤ button during recording-pause.

8. Special Functions

Teletext Operation with this Recorder

Teletext is a free service provided by television stations which is transmitted with the television signal, processed by the recorder, and then appears on your television screen.
Teletext consists of a large number of text pages, e.g. sports and political news, stock market prices, weather reports and lot of other information.

Preparation:

Turn on the television set.

Select the AV programme position for the video recorder on the television.

Selecting a television programme

The Teletext offerings, as well as the organization and setup of the separate pages, varies from station to station.

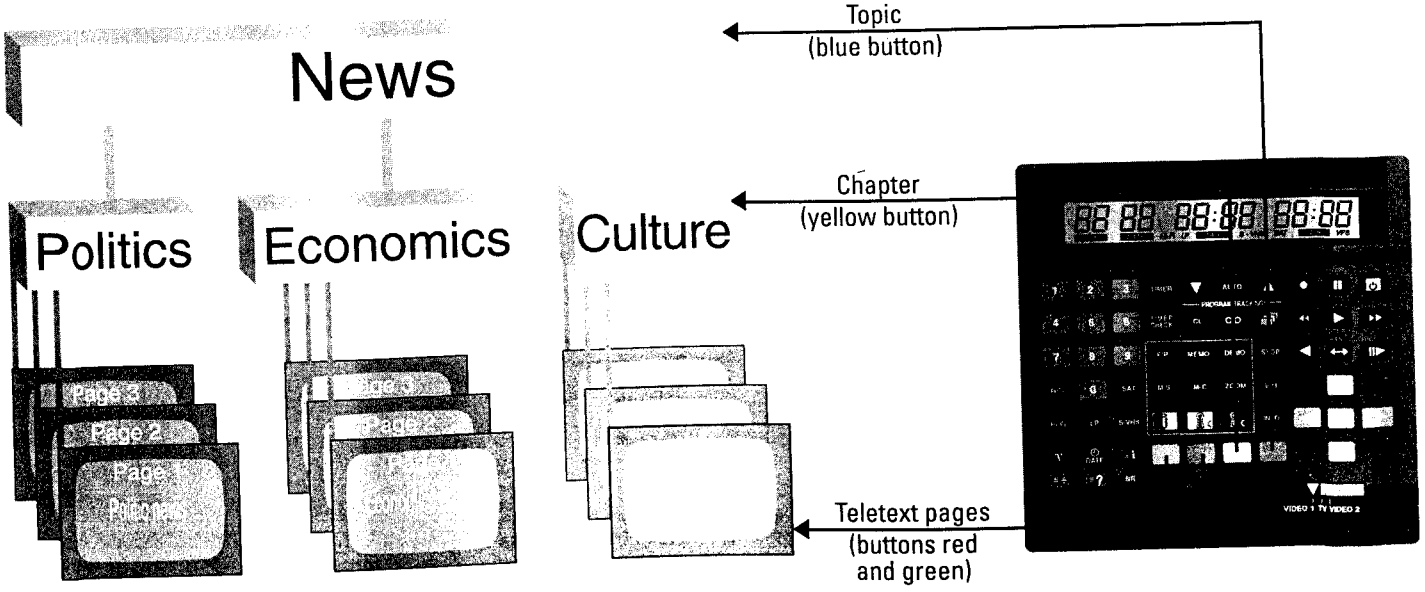
Therefore, you should first select the television programme whose Teletext pages you want to see with the ▼ PROGRAM ▲ buttons.

TOP-text mode (Table Of Pages)

With this new development of the conventional Teletext system, you no longer need to enter the numbers of the Teletext pages. You can call up different topics, chapters and individual pages from an overview just by pressing a button.
The illustration below shows the functional diagram.

Call up the "Info" menu with the INFO button.

Select the "Videotext" (Teletext) line from the "Info" menu with the number button 2.
Teletext page 100 (= Teletext overview) will appear.



Selecting a topic

You can select the topic by repeatedly pressing the button (blue).
The next topic will be shown in the blue Info line.

Selecting the chapter

You can select the chapter of the selected topic by repeatedly pressing the (yellow) button.

The next chapter will be shown in the yellow Info line.

If the selected chapter consists of several pages, you can retrieve these pages. Forwards with the button (green), or reverse with the button (red).

To reduce the waiting period for the selected Teletext page, the recorder automatically stores three Teletext pages:
the page of the next topic; button (blue)
the page of the next chapter; button (yellow)
the following page of the selected chapter; button (green).

Normal Teletext operation

Call up the "Info" menu with the [INFO] button.

Select the "Videotext" line from the "Info" menu with the number button [2].
The Teletext page 100 (= Teletext overview) will appear.

Select the Teletext pages

Select the desired Teletext page from the Teletex overview by entering the page number of the Teletext page in three digits with the number buttons [1] ... [0].
The page will appear after a short time.

The Teletext pages can be "flipped" up or down, page by page, with the [ ] (red) or [ ] (green) button.

Each time you press down on the [ ] (yellow) button, you can skip 10 pages.

Each time you press the [ ] (blau) button you can skip 100 pages.

Select the retrieved Teletext page from another television program (programme positions) by pressing the [▼] PROGRAM [▲] button.

If the TOP-text system is offered by a station, the recorder will automatically switch over to this system.

Multi-pages

Several sub-pages can be summarized under one page number, which are automatically turned to by the station.
You can recognize multi-pages by the display under the clock. The display 1/2, for example, means that you are viewing the first of two existing sub-pages.

If you want to view a sub-page for a longer period of time, press the [STOP] button.
The indication Stop will appear in the upper left.

Press the [STOP] button again to end this function.

Increasing character size

Normal letter size = basic setting.
Consecutively pressing the [ ] button selects:
double letter size in the top half of the menu;
double letter size in the bottom half of the menu;
normal letter size on the entire menu.

Displaying hidden text

Certain Teletext pages may contain hidden information, e.g. solutions to brain teasers or the VPS times for programming your recorder.

If you press the [ ] ([DATE]) button, concealed information will become visible.

If you press the [ ] ([DATE]) again, the information will be concealed again.

Subtitles for television programmes

Some shows are provided with subtitles for the hearing impaired. The page numbers (e.g. page 150) for these subtitles can be found in the announcement before the programme and in the Teletext pages' "subtitle preview".

At the beginning of the programme, enter the number of the subtitle page with the number buttons [1] ... [0].
You will see the subtitles of the selected TV show on the screen.

You can enlarge the size of the subtitles with the [ ] button.

Ending Teletext

To switch back to the television picture, press the [ ] button.

8. Special Functions

Your Recorder as a Receiver

So, your television set doesn't have a "cable-adapted" receiver yet?

No problem, this recorder has cable capability, i.e. it can also receive television programmes from special channels that are fed directly or sent via satellite into the cable system.

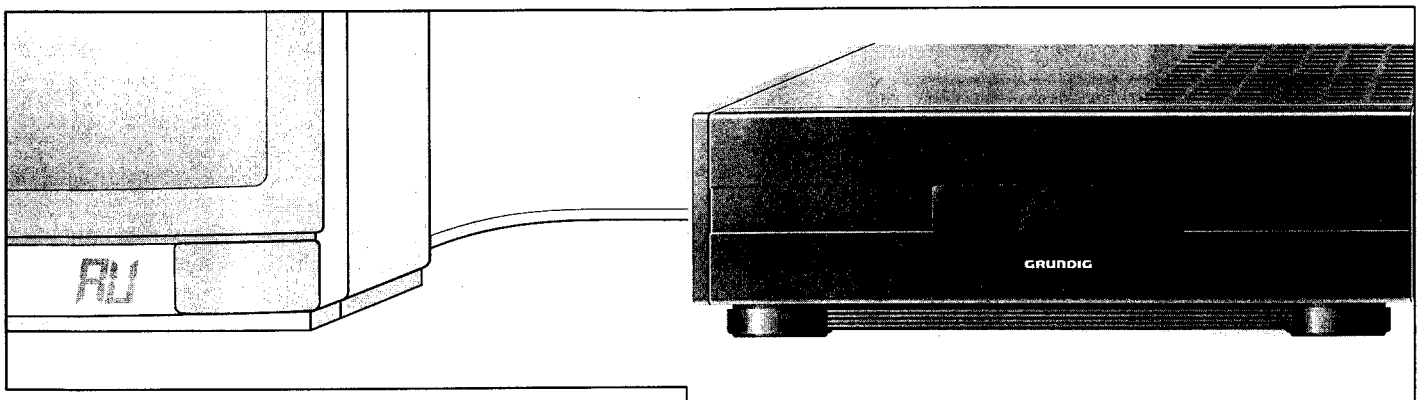
The recorder's transmitter has to be turned on to do this. Instructions can be found in the first part of the operating instructions on page 12.

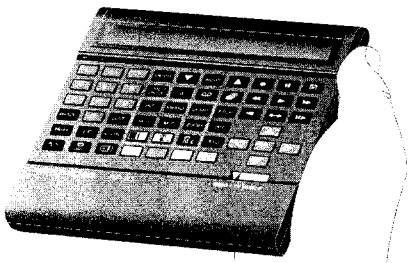
Preparation

Turn on the television set.
Your televison set serves as a monitor.

Select the AV program position for the recorder on the television set.

Press the ⏻ button on the remote control handset or on the recorder.





Selecting a television programme on the recorder

Using the remote control handset

Select the desired television programme with the ▼ PROGRAM ▲ buttons,

Unoccupied programme positions will be skipped;

or

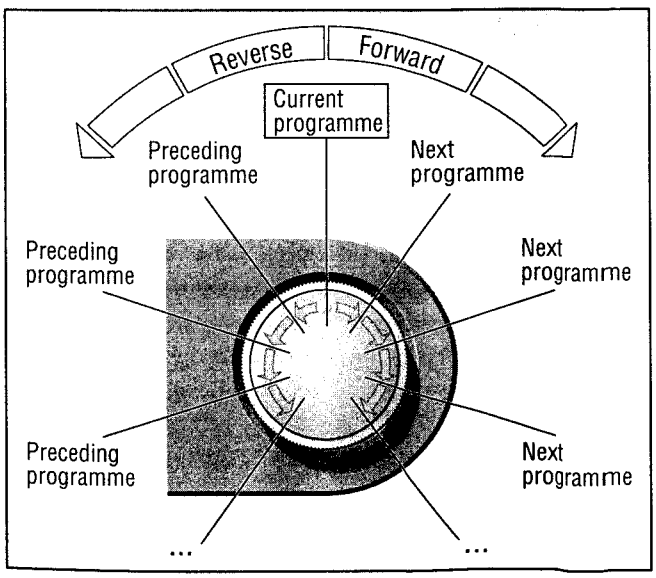
Enter the one- or two-digit television programme with the number buttons 1 ... 0 and then confirm it with the PROGRAM ▲ button.
You will see the selected programme on your television screen.

If the selected programme position is not occupied with a programme, the recorder will switch to the programme position last selected.

Using the jog wheel on the recorder

Select the desired television programme by turning the jog wheel (see illustration).
You will see the selected programme on the television screen.

Unoccupied programme positions will be skipped.

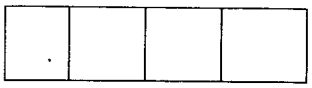


8. Special Functions

The Combination Lock

Your recorder has an electronic combination lock.
With this lock you can secure all of the functions. Even a cassette which has been inserted after the lock has been activated, cannot be ejected until you have unlocked it.
Locking and unlocking can be done very simply with a one- to four-digit i.d. number.

Write your personal i.d. number in the boxes to the right.



Your personal i.d. number!

Locking the recorder

To prepare for entering the i.d. number, first press the [⏻] button and then press the number buttons [8] [5] [0] [0] and the [OK] button.
This indication will appear on the recorder: 0000.

Enter the one- to four-digit i.d. number with the number buttons [1] ... [0].

Make sure to make a note of your personal i.d. number!

Store the i.d. number in the memory with the [OK] button.
The indication: LOCK resp. LOCKED will appear on the recorder along with the clock.
The recorder is locked.

If you insert a cassette now, it cannot be ejected.

In the case that you forget or misplace your i.d. number, your dealer can assist you.

Unlocking the recorder

Enter your personal i.d. number with the number buttons [1] ... [0] and press the [OK] button.
The LOCK resp. LOCKED indication will disappear and the clock will be shown on the recorder.
The recorder is now unlocked and each of its functions can be selected.

Calling Up and Changing the Time and Date

Calling up the time and date

The time and date can be called up even during recording or playback by pressing the [DATE] button one or two times.

Changing the time

Automatically

The time will be automatically updated with programme position 1 in Teletext mode.

Manually

Press the [⏻] button.

Enter a new time (in hours and minutes) with the number buttons [1] ... [0] and confirm it with the [DATE] button.
After you press the [DATE] button the clock will start.

The digital clock will continue to run when the recorder is unplugged (however, the time will not be visible in the display).

Changing the date

Press the [⏻] button.

Press the [DATE] button.
The date will appear.

Enter the four-digit day and month with the number buttons [1] ... [0] and confirm it with the [DATE] button.
The day, month and year will be shown.

Enter the two-digit year (e.g. 9 and 2 for 1992) with the number buttons [1] ... [0] and confirm it with the [DATE] button.

8. Special Functions

The Recorder's Continuous Functions

Your recorder can:
record continuously from different signal sources, e.g. from a television programme or from units connected to the corresponding jacks.

It can also continuously play back.

Archived cassettes cannot be used for the "continuous function recording"..

A continuous recording will not be archived by the recorder.

Setting up for the continuous function

Open the front cover of the recorder.

Insert a cassette with sufficient playing time for continuous recording.

Insert a previously recorded tape for continuous playback.
Start playback by pressing the ▶ button.
When you reach to place where playback should end, press the ⏻ button.

Press the number buttons 8 5 0 1 and then press the OK button.

This indication will appear on the recorder: CONT.

Then you can select the different functions.

Continuous function recording using the ⊖ EURO-AV ⊖ jack

Press the AV/CV button until AV appears in the recorder's display, then press the ● button longer.

The recorder will record to the end of the tape, rewind the tape and then begin recording again.

Stop the continuous function with the ⏏ button.

Continuous function recording using the aerial jack

Select a television programme with the number buttons 1 ... 0 and then press the ● button.

The recorder will record until the end of the tape, rewind the tape and then begin recording again.

Continuous function recording using the VIDEO IN and AUDIO LR IN jacks

Press the AV/CV button until CV appears in the recorder/display, then press the ● button longer.

The recorder will record until the end of the tape, rewind the tape to the beginning and will start recording again.

Continuous function recording using the S-VHS IN and AUDIO LR IN jacks

Press the AV C. button until CV S1 appears in the recorder's display, then press the ● button longer.

The recorder will record to the end of the tape, rewind the tape and then begin recording again.

Continuous function recording using the S-VHS ⊖ und AUDIO R ⊖ L jacks

Press the AV C. button until CV S2 appears in the recorder's display, then press the ● button longer.

The recorder will record to the end of the tape, rewind the tape and then begin recording again.

Continuous function playback

Start the function by pressing the ▶ button.

The tape will be wound to the beginning and playback will begin.
The tape will play until it reaches the position marked on the tape and will then be rewound to the beginning and will start again.

Ending the continuous function

Press the ⏏ button on the recorder.

8. Special Functions

Remote Controlling the TV Set

You can also control GRUNDIG colour televisions with the video remote control handset RP 81.

Televisions starting with TP 661 remote control handset and later models.

Televisions with the TP 590, TP 600, TP 610, TP 630, TP 650 and TP 660 remote control handsets.

The functions which can be controlled depend on the features on your GRUNDIG television set.

Preparation

Turn on the television set with the power button.

Move the switch on the remote control handset to the TV setting.

Point the remote control handset at the television.

Televisions with TP 590, TP 600, TP 610, TP 630, TP 650 and TP 660 remote control handsets

Selecting a programme

Select the programme positions 1 to 9 with the number buttons [1] ... [9].

Select the AV programme position with the [0] number button.

Adjusting the volume

If you press the [◀] button, the volume will go down.

If you press the [▶] button, the volume will go up.

You can reset the volume at the optimal value (basic setting) with the [OK] button.

Standby

During breaks you can switch your television to standby with the [⏻] button.

You can turn the television back on with the number buttons [1] ... [9].

Televisions with TP 661 remote control handsets and later models

Selecting a program

Select the programme positions 1 to 9 with the number buttons [1] ... [9].

For the two-digit programme positions 10 to 49, enter the tens place first, this will flash for ca. 3 seconds, during which time you should enter the unit place.

With the [▼] PROGRAM [▲] buttons you can scroll through the program positions one by one.

Select the AV programme position by pressing the [AV/CV] button; Select the CV programme position by pressing the [AV/CV] again.

Adjusting the volume

If you press the [◀] button, the volume will go down.

If you press the [▶] button, the volume will go up.

You can reset the volume at the optimal value (basic setting) with the [OK] button.

Stereo broadcasts

If your television receives a stereo broadcast, it automatically switches to stereo sound playback.
If the stereo sound quality is poor, you can switch to mono sound playback with the [1•] button.

Two-channel broadcasts

If your television receives a two-channel broadcast, for example a movie with the original sound on sound channel 2 and a dubbed version on sound channel 1, you can select the desired channel by pressing the [1•] button.
The indication 1 (for sound channel 1), or 2 (for sound channel 2) will appear on the TV screen.

Stereo depth, spatial sound

Widens the sound for stereo broadcasts.
Improves the sound for mono broadcasts.

Turn this feature on or off with the [↔] button.

Standby

During breaks you can switch your television to standby with the [⏻] button.

You can turn the television back on with the number buttons [1] ... [9].

8. Special Functions

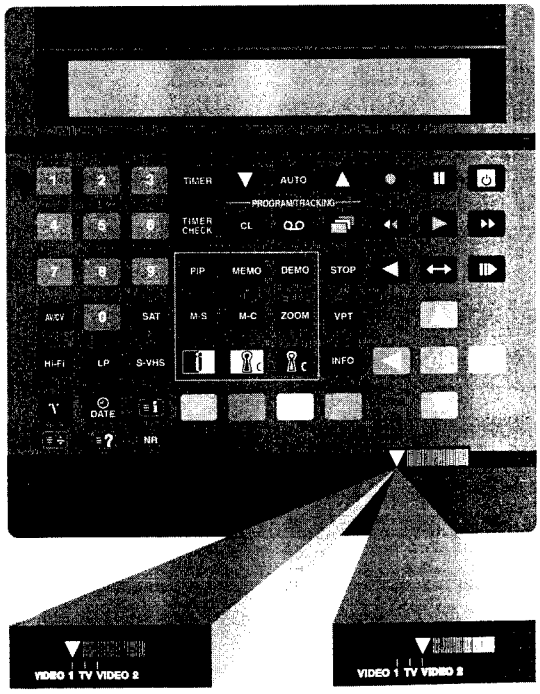
Remote Controlling Another GRUNDIG Video Recorder

With this remote control handset you can control different GRUNDIG video recorders independent of each other.

Your GV 280 and a second video recorder from the 600 to 900 lines and the GV 200 and later models.

Your GV 280 and a second video recorder from the 400 or 500 line.
To make this possible, the remote control handset and/or the respective video recorder must be adapted.

Any adjustments are erased when the batteries are changed in the remote control handset.



When the switch is in the VIDEO 1 position, you can control your GV 280;
When the switch is in the VIDEO 2 position, you can control the second recorder.

If the VIDEO 1 TV VIDEO 2 switch is not positioned in the selected video level when operating your GV 280, the indication VID 1 or VID 2 on the recorder will indicate that the remote control handset should be switched over to the other video level.

Remote control of two video recorders from the 600 to 900 lines and the GV 200 and later models.

To control your GV 280 push the switch to the VIDEO 1 position. It is not necessary to make any adaptations.

To control a second recorder, the command structure has to be changed.

Push the switch to the VIDEO 1 position.

Unplug your GV 280 from the power source.

Point the remote control handset at the second recorder and press the number buttons [8] [5] [1] [7] consecutively and then press the [OK] button.
The second recorder will only react if you push the switch to the VIDEO 2 position.

Plug your GV 280 back into the outlet.

If you want to undo the adaptation, push the switch to the VIDEO 2 position and press the number buttons [8] [5] [1] [6] consecutively and then press the [OK] button.

Remote control of the video recorders from the 400 and 500 lines

To control your GV 280 push the switch to the VIDEO 1 position, press the number buttons [8] [5] [2] [7] consecutively and then press the [OK] button.
Your GV 280 will react only if the switch is in the VIDEO 1 position.

To control the recorders from the 400 or 500 line, the command structure must be changed.

Push the switch to the VIDEO 2 position.

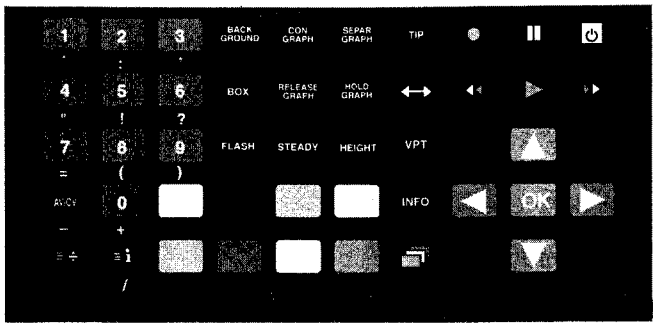
Hold down the [STOP] button until C0 16 appears and, within 5 seconds, press the [↔] button.
Display on the remote control handset: C010.

If you want to undo the adaptation, push the switch VIDEO 1 position and press the number buttons [8] [5] [2] [6] consecutively and then press the [OK] button.

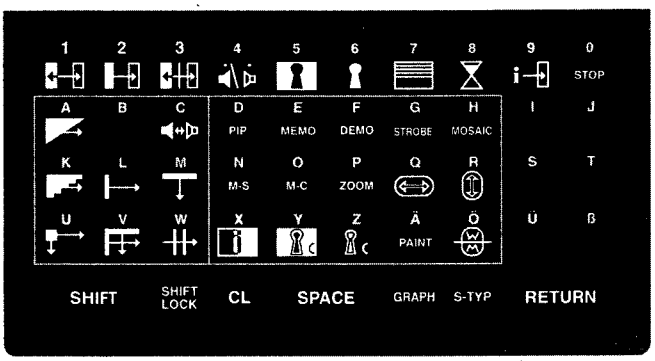
Then push the switch to the VIDEO 2 position, press the [STOP] button until C0 10 appears and, within 5 seconds, press the [↔] button.
Display on the remote control handset: C016.

Keyboard Assignment of the Remote Control for ...

... Punctuation marks

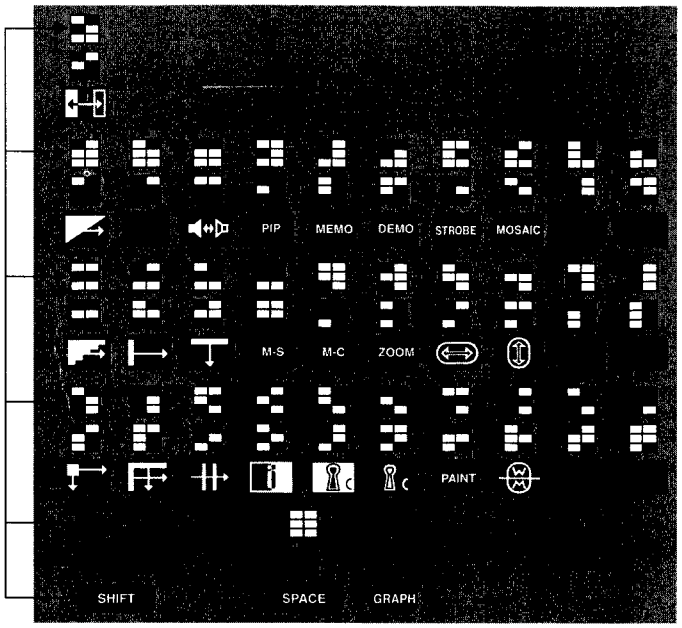


... Numerals and letters



For upper-case letters, first press the SHIFT button.

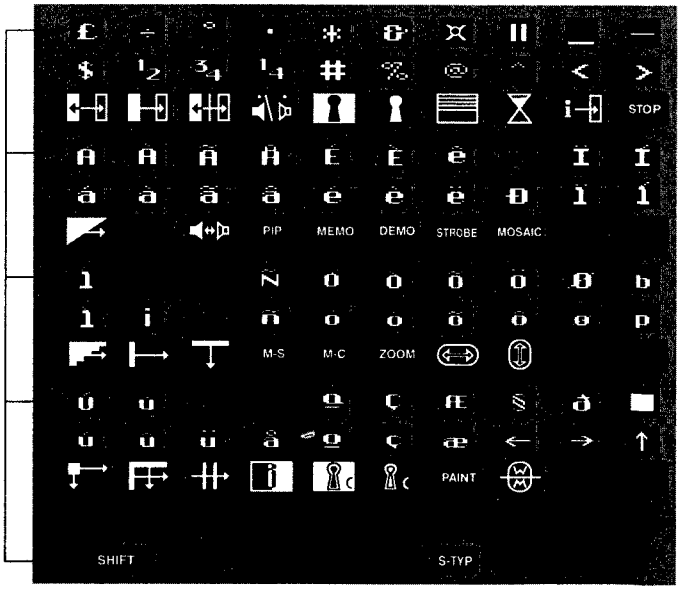
... Graphic characters



To switch over the keyboard to graphics characters, press the GRAPH button.

For the graphics characters of the upper rows (see arrow), first press the SHIFT button.

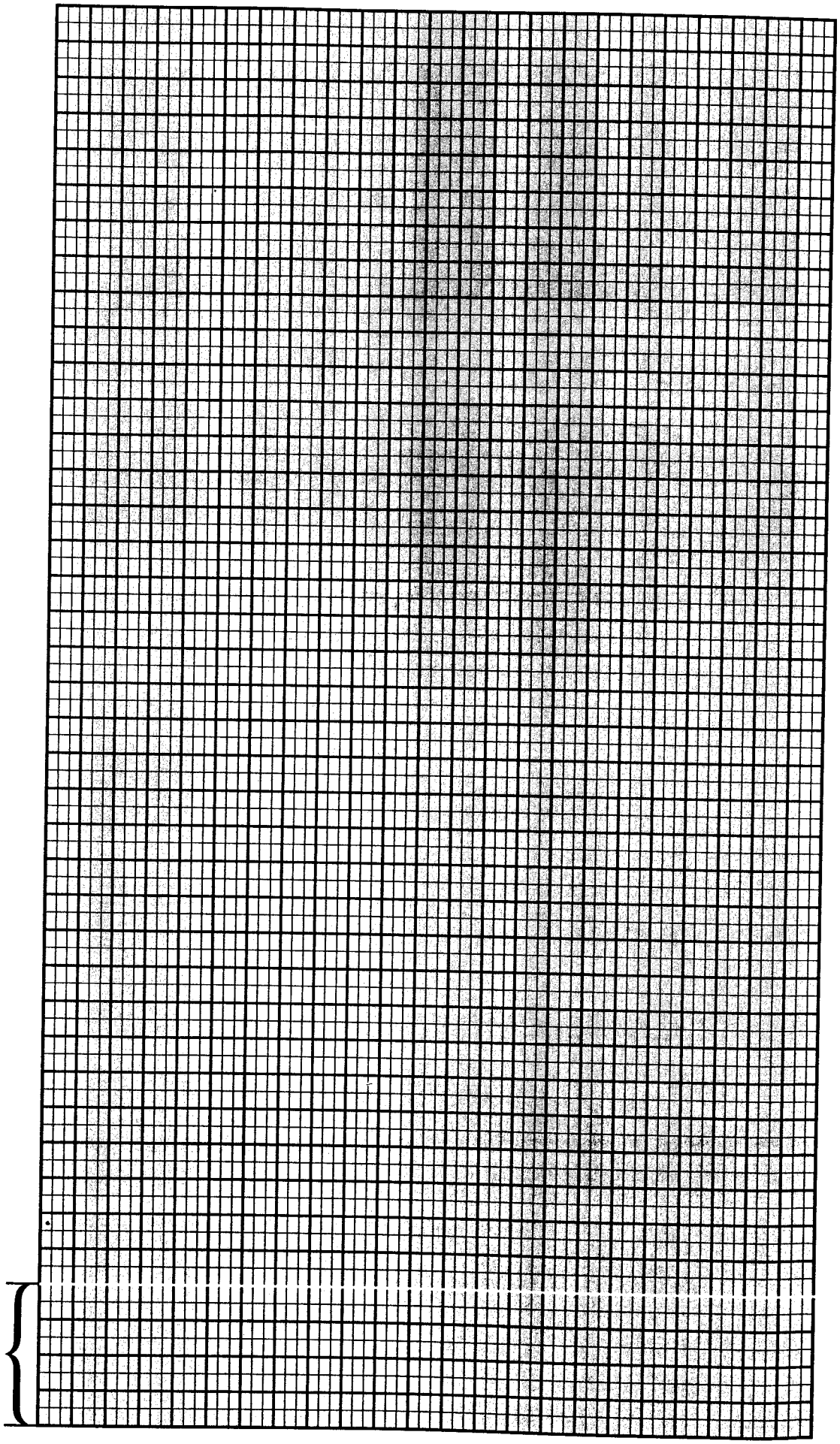
... Special characters



To switch over the keyboard to special characters (for one character only), press the S-TYP button.

For the special characters of the upper rows (see arrow), first press the SHIFT button.

Pattern for making an outline of the title page



It is not possible to write on the first four cursor fields.